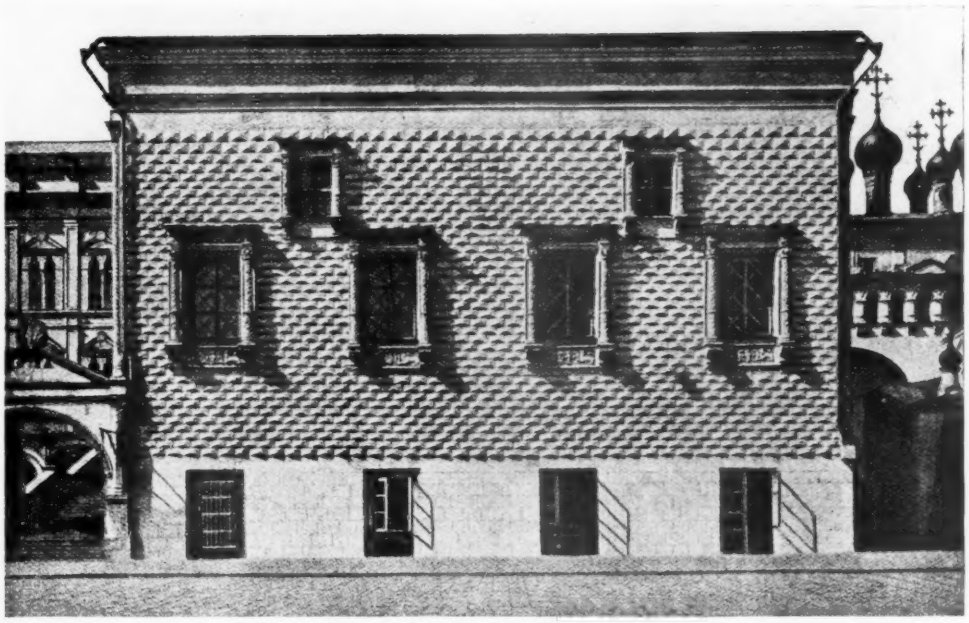

FIG. 3.—MOSCOW—FACETED PALACE

Russian Architecture*

By W. HENRY WARD, M.A. [*F.*]

THE Russian ballet with the alluring crudities of Bakst staging has been with us these dozen years, Russian music these thirty, and the Russian novel perhaps fifty, but what do we know of Russian art—of Russian architecture, sculpture and painting, or of the minor crafts? So little that but for the gaily coloured wood utensils and embroidered garments of the Mujik and barbarically framed ikons such as are occasionally to be found in our shops, and a vague impression of the semi-oriental churches of the Kremlin, the average man of taste might well ask: "Is there any Russian art to know?" And he might still be asking it after a special course extending from 500 B.C. to the nineteenth century. The jewellery and ceramics of the shores of the Euxine, the mosaics of Kief, the frescoes of Novgorod, the churches of Suzdalia and Muscovy, the Kremlin of the Ivans, the palaces of Peter the Great and Catherine II., would reveal to him a perhaps unsuspected wealth of artistic production in Russia; but he would still need convincing that it was in any real sense Russian and not merely the work of Hellenes, Byzantines, Italians, Germans, and Frenchmen, to say nothing of Poles, Swedes, Flemings, and Englishmen.

The literature on the subject is not very voluminous, even in Russian, and the information to be derived from much of it is distorted by the eagerness of the writers to prove some thesis of their own. Of the few lines professedly devoted to it by the *Encyclopædia Britannica* one-third consist of a description of a Roumanian(!) church, while the remainder contain at least one more than disputable statement.

One of the earliest works to bring the subject into notice in Western Europe was Viollet-le-Duc's *L'Art Russe* (1877), but this labours under a double disadvantage of insufficient information and tainted sources. For his data were supplied him from Slavophil *milieux* desirous of utilising a distinguished foreign author to buttress their own doctrines that Western art was the enemy and that salvation was only to be found in the native tradition. He was thus led to exaggerate its value, and incidentally to emphasise its supposed Asiatic origins and minimise the relations between Russia and the West. Further, the scope of his book is confined to architecture and ornament.

The work of Monsieur Louis Réau (Henri Laurens,

* *L'Art Russe des Origines à Pierre le Grand*. By Louis Réau, ancien directeur de l'institut français de Petrograde. Paris, 1921. [H. Laurens.]

Paris, 1921) is perhaps the first to deal with the Russian arts as a whole up to the era of Peter the Great, and to do so objectively with the aim of "studying them as an independent organism subjected to certain laws of evolution, constantly modified by the action of social and historical conditions, and in the end shaping themselves to suit these conditions."

The serious archæological studies, the most valuable outcome—so far as art is concerned—of the nationalist movement of the nineteenth century, have brought to light evidence on all periods and promoted the illustration of extant examples. All this material, which was not available in Viollet-le-Duc's time, has been exhaustively sifted by M. Réau, whose long residence in Russia as director of the French Institute in Petrograd gave him special facilities for studying Russian art at first hand.

He has produced a volume of quite remarkable clarity in exposition and arrangement, containing in a comparatively small compass, yet without any crowding, a large mass of information, accompanied by sound criticism and illustrated by adequate photographs of typical examples. Its only defects are the absence of any plans or other drawings and the lack, too common in French works, of an index.

His general conclusions are that, while the Russians are indebted to an unusual degree to other nations for inspiration and technique in the arts they have practised—so much so that in only one of the five great periods of art in Russia can the native element be said to predominate—yet these borrowings have been so much modified by native taste and local conditions as to produce a distinct and original flavour and results by no means contemptible. He admits, however, that Russia betrays her inferiority to that of any of the great art centres of the world in this point at least, that she has exercised no influence on art abroad, even in other Slavonic lands.

This relative inferiority is by no means surprising. Russia has had many drawbacks to contend with. Her national temperament is spasmodic and averse to sustained effort, brief fits of violent energy soon giving place to long spells of inertia. Her vast monotonous plains, with a climate of alternating extremes of heat and cold, the difficulties of transport and intercourse, the absence of minerals and stone, are conditions unfavourable to the growth of industries and consequently of that city life without which no great art has flourished. Then a series of untoward circumstances, including internecine dissensions and repeated foreign domination, conspired to retard in her the growth of civilisation, which has thus lagged several centuries behind the rest of Europe. In her position outside the Roman Empire and remote from Western life, she received Christianity 500 years and printing a century later than France, and retained many mediæval institutions, such as that of serfage, down to the eighteenth or even the nineteenth century, while her secular literature is no older than that of the United States.

Under such conditions we find no continuous national artistic development radiating over the country from one or more centres, but instead we see one school of purely local influence develop in some temporarily favourable centre and die out with the prosperity or political power of that centre, to be succeeded after an interval by another school of equally local influence in another part of the country.

In historical times art first flowered on Russian territory in the Greek colonies which fringed the Black Sea and extended their trading activities up the southern rivers. The relics of this period consist principally of pottery and jeweller's work distinctly Hellenic in inspiration and technique, but often exhibiting a barbaric luxuriance foreign to the Hellenic genius and possibly due to its execution by Scythian craftsmen, while occasionally betraying indications of Persian influence.

The break-up of the Roman Empire is followed by a blank of several centuries. In 862 the incoherent Russian tribes called in Scandinavian help against the nomad Pechenegs. The dynasty of Rurik gave them the germs of political stability; and the baptism of Vladimir, Prince of Kief, in 988, brought them into the community of Christendom. The eleventh and twelfth centuries were a glorious period in the history of the Russian commonwealth, but its territory was a narrow one, whose prosperity was bound up with the water-borne trade passing from the Black Sea to the Baltic by way of the Dnieper, the Volkhof and the Neva, with only a single transhipment between Constantinople at one end and the Hanse towns at the other. Strung out along the "Road of the Variags," the cities of Kief, Chernigof, Pskof, Novgorod, grew in wealth and splendour, their merchants voyaging annually to the Bosporus to barter their furs, wax, and honey for the textiles, ivories, jewellery and other luxuries of "Tsargrad." Their princes were the equals of any European sovereigns. Jaroslav, the Charlemagne of Russia, married his sons to daughters of the Emperor Constantine XII. and of Harold of England, and the kings of Norway, Hungary, and France were his sons-in-law.

Shut off as she was by roadless forests and hostile tribes from the culture centres of the West, and in direct contact with the Eastern Empire at a time when its artistic influence extended from the Caucasus to Poitou and from Visby to Palermo, Russia could hardly have drawn her art, as well as her religion, from any other source. The two are, indeed, most intimately bound up, and nowhere more than in the Orthodox Church has art been so strictly circumscribed by ecclesiastically imposed limitations. Not only was the whole iconography

FIG. 1.—ST. SOPHIA OF KIEF

FIG. 2.—ST. SOPHIA OF NOVGOROD

FIG. 4.—CHURCH WITH 21 CUPOLAS—KIJSKI POGOST

FIG. 5.—OSTROVO—CHURCH OF THE TRANSFIGURATION

subject to immutable rules governing its types of representation, its arrangement within the sacred edifice, and even its colour schemes ; not only did the proscription of sculptured images relegate the plastic arts to insignificant position in the decoration of churches, but their plan and even their elevations were severely controlled by minute regulations.

Of the splendours with which the House of Rurik endowed Kief little is left, but that little is sufficient to prove the correctness of the chroniclers who attribute them to Byzantine builders and craftsmen. St. Sophia of Kief (Fig. 1), after frequent restorations and additions, still shows a brick structure covered externally with stucco and internally with a rich robe of marbles and mosaics supplemented with frescoes. Like its contemporaries, St. Mark's of Venice and St. Front of Périgueux, it has a plan based on that not of St. Sophia of Constantinople, but of the Church of the Apostles, though probably indirectly so through Armenian and Georgian examples. The plan of the Greek cross inscribed within a rectangle, with five domes and eastern apses, thus introduced, became the established one for Russia. To this were usually added external galleries on three sides and an outlying bell tower. The elevations were divided by pilaster strips into three bays terminating in arches, the centre higher than the others.

The glory of Kief was short-lived. The empire of the House of Rurik fell to pieces in sanguinary dynastic wars. Power shifted in the twelfth century to Novgorod the Great on the Volkhof, a powerful republic of the Venetian type with a vast colonial empire stretching from the Baltic to the Urals, and a flourishing trade with the Hanse. The prosperity of Novgorod, which had a duration of some three hundred years and succeeded in escaping the Tartar domination, gave rise to a considerable body of architecture. On the whole this is less ambitious than that of Kief: its scale is less, its plans and elevations are simplified, and it does not employ mosaics. But it introduces modifications (Fig. 2). For example, for the flattened spherical domes of the Byzantines it substitutes externally bulbous timber cupolas designed to prevent the lodgment of snow, and raised upon drums pierced with windows—and this fully a century before the advent of the Tartars, to whose importation this form has been attributed. Later on the cupola on domes and towers tends to give place to another form of wood construction, the steeply hipped or pyramidal roof. Other features, such as the introduction of the gable and blind arcading on church fronts, seemed to have come from Germany through the coast towns of Riga and Reval. The characteristics of the Novgorod churches are reproduced in those of its satellite Pskof, which, however, develop peculiarities of their own. Their domes are sometimes covered with coloured glazed tiles, and they elaborate their external galleries and their arcaded bell towers.

The great title to admiration of Novgorodian mediæval architecture is the splendour of its fresco decoration, much of which has been recovered beneath many coats of whitewash since toleration was granted in 1905 to the Old Believers. It exhibits in its fourteenth and fifteenth century examples, under general conformity to the rigid rules of Eastern iconography with its avoidance of realism, an unexpected freedom and beauty in composition and charm in the sympathetic rendering of scenes of sacred history which recall the Italian Primitives. There is, in fact, probably more than an accidental affinity, for while the early Italians were themselves influenced by Byzantium, the later Byzantines had not escaped the Italianisation of the Court of the Palæologi.

Of the subsequent fortunes of painting in fresco and miniature and its decline under Dutch and German influence in the seventeenth century, of the mediæval and subsequent history of the arts of the illuminator and embroiderer, enameller and tile-maker, founder, jeweller, goldsmith, and woodcarver, Monsieur Réau treats fully. But space forbids to follow him into these attractive regions.

After the twelfth century the political centre of Russia begins to shift eastward, by the colonisation of Suzdalia, a region belonging to the Volga basin ; and while commercial relations were thus established by that river with Persia and Caucasia, touch was gradually lost with the West, and even the intercourse with Constantinople dwindled in importance. The Tartar domination, which began with the devastation of the Suzdalian cities in the thirteenth century, completed the severance of the budding Russian civilisation from Western influences.

The churches of Suzdalia constitute a definite architectural group. They are, as a rule, even smaller in scale than those of Novgorod, and seldom had more than one cupola. This was the case originally, even in the most splendid example, the Cathedral of the Assumption at Vladimir (1158, rebuilt 1183). Each bay of the elevations usually terminates in an arched gable. But a more important characteristic of the group is that they are stone-built and decorated with carving, for the rudely cut monsters and foliage work in low relief with which their façades are enriched can hardly claim to rank as sculpture.

The Tartars of the Golden Horde, whose incursions began in 1224, ruined Suzdalia, curtailed the empire of Novgorod, completed the decline of Kief, and held the greater part of modern Russia under their sway till near the close of the fifteenth century. This Mongol domination destroyed much and built nothing. It retarded the growth of civilisation for three centuries, but, while leaving traces in social and political institutions, contributed to art and more particularly to architecture nothing but a scarcely definable flavour of Oriental taste.

FIG. 7.—JAROSLAV—CHURCH OF ST. JOHN THE BAPTIST OF TOLTCHKOVO

FIG. 8.—THE KREMLIN OF ROSTOF

The Princes of Moscow, hitherto an insignificant township lost among the forests, succeeded, by a policy of astute subservience to the Tartar rulers, in taking advantage of the decay of their greater rivals and their own position as intermediaries between the Asiatic markets on the Caspian, the Volga and the Don and those of the White Sea, the Baltic and Poland. They rapidly grew in power till they were able to drive out the Tartars piecemeal, a process completed by 1480. The Eastern Empire had then fallen, and, assisted by a marriage with a Byzantine princess, they claimed the inheritance of its prestige, both political and ecclesiastical.

Thus during the sixteenth century, under Ivan the Great, Basil, and Ivan the Terrible, they completed the subjection of the surrounding Russian states and came once more into contact, hostile or otherwise, with Western Europe.

When a new focus for architectural activity was thus provided by Muscovy, the Italian Renaissance was in the full tide of expansion, and the Muscovite Tsars were among the first foreign sovereigns to engage Italian craftsmen. That the need for such technical assistance was a crying one may be judged by the fact that the art of building otherwise than in timber was completely lost under the Tartars, and that no Muscovite knew how to put up a wall that would not at once collapse. A whole colony of these "Friazines"—or Franks—as the Russians called all Latins, came to the call of the Tsars, among whom the principal, from the architectural point of view, are Ridolfo Fioravanti, of Bologna, a sort of universal genius after the manner of Leonardo da Vinci, and one of the Solari, the celebrated mason family of Milan.

The chief traces of direct Italian design of this period are the crenellated walls and watch towers of the Kremlin (1485), recalling the Castello Sforzesco of Milan, and the Granovitaia Palata or Faceted Palace (Fig 3) (so called from its diamond point rustication) (1487), an imitation by Ruffo Solario in rude forms and workmanship of the Bevilacqua Palace at Bologna. It is remarkable that the acropolis which arose almost simultaneously in three great Slav capitals—the Kremlin of the Muscovites, the Wawel of the Poles at Cracow, and the Hradschin of the Czechs at Prague—was in each case the creation of Italians. With the same pliability which they displayed everywhere—in France, in Portugal, in Hungary—the Italians confined themselves in church building to giving an Italian flavour to the native and traditional forms by expressing them in Italian detail. In Fioravanti's Cathedral of the Assumption (1475), modelled on that of Vladimir, these Italianisms are reduced to a minimum; but they were gaining ground, and the Cathedral of the Annunciation, erected a few years later by builders from Pskof, has arabesqued bands and architraves, while the Cathedral of the Archangel Michael, by Alevisio Novi (1509), has a complete pilaster system and shell niches in its gables.

Russian architecture now entered upon a new era. Byzantine art, which had long been the dominant element in its development, was now cut off at its source. Germanic influence had had little force, and that confined to the Baltic basin. The Tartar era was one of destruction, not of construction. The Italians had given valuable help in the revival of the art of building, but their influence on that of architecture had been superficial. Now in the age of national expansion a more national art was to arise, shaped by the craft of timber construction indigenous in a land of forests.

Hitherto, apart from city churches, fortresses, and walled monasteries, and a handful of princely residences, virtually everything in Russia had been built of wood. The simplest rectangular structures of axe-dressed trunks laid horizontally, covered with shingled roofs, either gabled or hipped, not only served for the habitation of the peasant (*isba*) and the more well-to-do (*khoroma*), but afforded types for the vast majority of churches.

The *isba* church is oblong in plan, and comprises in its most developed form a sanctuary prolonged by square or polygonal eastern apses and shut off by the iconostasis from the nave, which is approached through a western narthex or entrance hall. External galleries are sometimes added. Occasionally the church is in two storeys, with an unheated summer church below and a heated winter church above, reached by an external stair in two flights. Its plain single-span roof bears a purely decorative cupola.

The tent (or *shatior*) church is distinguished by its generally pyramidal form. The square or octagonal nave has a hipped or conical roof, often rising in several stages and terminating in a bulb. Contributing to the pyramidal effect, the roofs of sanctuary, narthex, and chapels crowd round the central cone in tier upon tier of curiously shaped gables superimposed one upon the other and diminishing in size as they ascend (Fig. 4).

Civil architecture in wood seems to have attained considerable magnificence, but the only survival of it is the model made for Catherine II. of the Palace of Kolomenskoie, near Moscow, before it was pulled down. It had grown up bit by bit from the time of Ivan I. (1328) to that of Feodor III. (1676), and exhibited a not unpicturesque but confused jumble of spires, bulbous domes, ogee gables, Italianate windows, and rude carvings suggestive of the crude splendours of a barbaric court. The effect was doubtless greatly enhanced by the use, as on the churches, of a brilliant polychromy.

From 1530 to 1650 is regarded by Monsieur Réau as the period of a genuinely national architecture, in which the indigenous wood forms were used and developed, and their technique transferred to buildings in brick and stone and wedded to Italianesque detail.

The strange pyramidal church of Diakovo, near

FIG. 6.—MOSCOW—CHURCH OF THE BLESSED BASIL

Moscow (1529), is one of the first to show this transference and turn its back on Byzantine precedent. Those of Kolomenskoie (1532) and Ostrovo (1550) (Fig. 5) develop the tendency. Their central pyramids tower steeplewise above the subsidiary buildings, the transition from each stage to the next being managed by means of tiers of the characteristic ogee gablets known in Russia as *bochki* (barrels). Ivan the Terrible's votive church of the Blessed Basil in the Red Square of Moscow (Fig. 6), erected by Russian architects (1560), exaggerates every native feature, and produces a striking if barbaric effect, enhanced by a brilliant decoration of glazed tiles and painted stucco.

The early seventeenth century introduced a type of church with three pyramidal steeples in a line, either over the three compartments of the church or over a single elongated compartment.

But the clergy, taking fright at so many innovations, proscribed the pyramid, and made the five-cupola scheme obligatory. This decree was not, however, universally obeyed, and the architects, even if obliged to conform as regards the main building of the church, retained the *bochka* pyramid for the campanile. The enforced simplification of elevations was in any case of short duration, owing to the introduction of the florid Baroque of Poland, the first wave of that flood of occidentalism which, in spite of a revival of native architecture in the late seventeenth century in the Upper Volga cities of Jaroslav (Fig. 7) and Rostof, submerged Russian art in the eighteenth.

This development Monsieur Réau does not pursue for the present, though it is a subject which would well repay study, for the architectural activity initiated by Peter the Great, and ardently promoted by Catherine II. and Alexander I., endowed Russia, principally through the agency of French architects, with a series of great buildings worthy to compare with anything contemporary in more western lands.

It is questionable indeed whether any development or modification of the elements of the national style could have resulted in a satisfactory architecture for modern requirements. This national style was based on the two piers of a long Byzantine tradition and native timber construction. It had a thin veneer of Italianism superinduced on a bias to Oriental forms, which was due rather to age-long intercourse with Asiatic peoples than directly to the Tartar conquest. These heterogeneous elements were never thoroughly digested or welded into a consistent whole.

In the picturesque confusion of piled-up ornament and childlike love of vivid colours the crowding shrines of Moscow produce the effect of a dream architecture, palaces of Aladdin called up by glamour in a night. Behind a quiet landscape of woodland and lake, such a church, set amid the long loopholed walls and massive towers of the Kremlin of Rostof (Fig. 8) or the nunnery of Suzdal, gleams like a jewelled clasp on a sober robe. Such are the charms of Russian native architecture. A stoneless land where cities are as a drop in the ocean, and intellectual life the monopoly of an infinitesimal minority, could not be expected to give birth to a building art of more solidly architectonic quality. For this it had perforce to turn to the maturer nations of the West.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

The Relation of Plan to Elevation*

By H. S. GOODHART-RENDEL

THE subject which I have chosen to talk about to-day is one of the mysteries of our craft, a subject about which the lay critic is generally ill-informed, but which to the architect is an imperative study. I think that the reason for this difference is that whereas the lay critic is concerned with what is designed, the architect is concerned not only with that, but also with how it is designed. The critic pronounces upon æsthetic effects; the architect must investigate causes, the architect must learn how to extract the proper beauties from the necessities of his programme. It is to the public advantage that Mr. Brown's house should fulfil its capacity of being beautiful; it is to Mr. Brown's advantage that his house should be convenient; it is to Mr. Brown's architect's advantage that the beauty and the convenience should be allies, rather than that they should do battle in his brain and on his drawing-board. The lay critic should look after the public interest, Mr. Brown will look after himself, and the architect must seek that manner of working in which Mr. Brown's needs will come as a help to him rather than as a hindrance.

You will observe that I do not say that the expression of plan in elevation is a virtue in architecture. I say, rather, that it is a virtue in an architect. By its practice the architect keeps himself in good condition for artistic creation. Similarly, positive irrelevance of elevation to plan is not of itself a vice in architecture, but its perpetration is likely to prove a bad vice in an architect, and one which leads to artistic sterility. All major architectural forms have a rational origin, more or less remote, and, if the art is not to die, from new needs new forms must arise. Experience shows that only thus can they come into being; little good has ever come of arbitrary invention in architecture. The architect who falsifies his plan to make it fit a preconceived elevation not only deprives his building of its rightful individuality, but also is on the road to becoming incapable of anything except of repeating himself, or perhaps of repeating other people.

This is the danger which threatens American architecture at the present time. The gay parterre of American architecture, which we all admire, is composed too much of cut flowers from Europe. Even the native majesty of her skyscrapers is marred, more often than not, by the misunderstood architecture with which they are trimmed. A recent writer in a popular American magazine has attempted to justify the Gothic attire in which some of these sky-scrapers masquerade by citing the coincidence of the lines of mediæval masonry design with those natural to a steel-framed structure. The old forms serve our purpose, he says, so why not use them? Would he, I wonder, use the Portland vase as a salad bowl?

Yet these American reproductions are often beautiful: their insincerity does not spoil their appearance. The beauty of an elevation is independent of its relation to the building which it covers; the eye's proper pleasure in a façade is not that of guessing what lies behind it. Let us then be grateful for the beauty of borrowed plumes, worn for our delight; but as architects let us try to grow our own feathers. Let us not seek novelty for novelty's sake, but let us encourage it when it emerges naturally from new conditions of building. In particular, let us take our plan into our confidence and listen to what it has to say about our elevation. A good dancer whom I know divides the men with whom she dances into partners and opponents. You will be wise if you make a partner and not an opponent of your plan.

In what I have said so far I have assumed that the plan of a building is that arrangement of rooms which best satisfies the claims of usefulness and order—of usefulness, since usefulness is the motive of almost all building; of order, since without order man's work were lower than the honeycomb or the spider's web. It may be, however, that in the quest of beauty men may make strange sacrifices; they may even, for emotional reasons, require from their architect not only an unsuitable elevation, but also the unsuitable plan of which the elevation is the outcome. This need not perplex the architect. Anybody can make a fortified castle look like a fortified castle; and if a man builds it and undertakes to live in it, it is not his architect, but he himself, who will get into trouble. The architect just builds a fortified castle. No, the architect's trouble begins when the County Gaol has to be the county gaol and yet to look like a fortified castle. The best that he can do then is to design a hypothetical castle of which the plan and elevation are correctly interrelated, and to fit it by adaptation and compromise to serve as a gaol. If the result is a bad gaol, it is the fault not of the architect but of those who set him to work upon so unnatural a task.

Given, then, that the architect is wise in letting his plan have its say in the shaping of his elevations, how far is this likely to carry him in design? We are apt to speak—I myself have spoken already in this lecture—of the architectural "expression" of a plan. What do we mean by this? Do we mean merely that the building tells the spectator what rooms it contains? If that is what we mean, such "expression" is only a complicated way of doing what would be done more simply by painting up the information on an auctioneer's board. It is not of the slightest æsthetic interest to anybody that a

* A Paper read at the Liverpool School of Architecture, 12 January 1922.

house should happen to contain three reception, ten bed and dressing, two baths, h. and c., and the usual offices. There is no architectural language in which such facts can of themselves make beauty. Surely what we mean is rather the maintenance of the relative importance and dignity of these rooms, one to the other, in whatever be visible of them externally; that the drawing-room windows are taller than those of the servants' bedrooms, that the chief entrance is emphasised more than is the door of the coal-hole. Perhaps we mean, also, that the articulation of the plan is not needlessly concealed, that its elbows and knees can be detected beneath its garments. The study of the naked plan is as essential to the architect as the study of the naked figure to the painter, and a foundation of sound architectural anatomy is necessary to all expressive buildings.

This degree of "expression," however, is not always possible; in street buildings, for example, you can hardly express the anatomy of the structure in a single frontage. Sometimes, also, there may be next to nothing to "express"; the "expression" of the plan of a warehouse must be almost altogether negative. Sometimes, again, "expression" which is possible may not be desirable for reasons which are not architectural; probably the less that is made of a crematorium chimney the better. In short, a plan may be inexpressible, either because of its confined position or because it contains nothing to express, or again because it contains that which is better not expressed.

Therefore, although this expression of plan in elevation is a virtue in an architect, it cannot be a virtue necessary to salvation. Its opposite vice, however, is extremely dangerous. Truth is single, and falsehood manifold; a truthful building will enjoy in its own right that æsthetic merit of consistency which must painfully be struggled for in a building in which appearance and actuality are at variance. If I make a plan with a great room in its midst, and allow that great room's great features to dignify the middle of my elevation, if the plan is right, the elevation has a very good chance of being right too. But if, with a plan containing no such great room, I elect to adorn the middle of my façade with windows and other details of exaggerated size, the odds are thousands to one against my hitting upon pleasing proportions. I have nothing to go by. Of course, if I choose, I can plan a great room and then cut it up. But the more sensible thing for me to do is to try to express architecturally a plan which consists only of little rooms; or else, if the little rooms seem too uninteresting to be expressed, to make a decorative façade of a purely non-committal kind.

By architectural truth, however, I do not mean hair-splitting. The architect who exhibits on his elevations every small irregularity of his plan is like the man who answers the question "How are you?" by detailing every small irregularity of his stomach. If one window in a range has a higher sill than the others, and looks ill in consequence, it is adding insult to injury to explain that this is the expression of the pantry sink. I would go further, and say that if one window in a range is filled with bricks instead of glass, it is merely irritating to be told that this is because the window spacing demanded by the plan happens not to fit at this particular point. Such an accident is extremely uninteresting; it is too trivial to make for any peculiar beauty, and good manners require that it be concealed.

Now, what is the difference between truth and hair-splitting? Why is one good and the other bad? Is it only a question of magnitude; is there a size-limit to the innocuous lie, exceeding which it becomes heinous? I cannot think that this is so. Rather do I suggest to you that truth is good in the smallest things as in the greatest, and that we all condemn hair-splitting because it is not true, because in it general truth is falsified by literal truth in some unimportant particular. Physical conditions constantly force the modern designer to suppress minor facts in order to disengage major facts and to give to these their proper expression. Either the pantry sink must remain unexpressed or else the symmetry of the façade must go. And the symmetry of the façade may be the obligatory expression of the general lay-out of the plan, a thing somewhat more important than the location of the plumbing.

Yes, the suppression of small truths is often forced by physical conditions upon the modern designer. Gothic builders knew no such compulsion, and, although Greek and Roman builders may have left much of structure unconfessed, they did this of choice, not of necessity. Why is this? What is it which has made so great a difference between ancient and modern conditions?

I do not think that it is any change in opinion about the proper relation of plan to elevation. No, I think there has been a radical change in the system of planning. Almost all modern planning makes much use of the partition-wall, a thing little used by the ancients. By partition-wall I mean a wall which divides one room from another without serving any structural purpose. It is difficult at first to suppose that such a thing is not as old as building, but a little recollection will show us that it really is not so. Let us imagine a primitive tribe of hut-dwellers of which each family man provides himself with what we to-day should call a one-roomed tenement. The chief of this tribe will feel it due to his position to inhabit twelve one-roomed tenements. These he will place close together, and he may even rig up some rude shelter over the path from one to the other. The growth of skill in building will provide the next chieftain with a conglomerate of huts in which the space between hut and hut has been annihilated. The twelve one-roomed tenements will now have become one twelve-roomed tenement. But the conglomeration

will not have been fusion. Each room will retain its hut-hood, each room will still have its own roof. Perhaps if two rooms have been placed end to end, so that their roofs are continuous, their common end-wall may have lost its structural function and become a partition-wall dividing transversely an oblong hut. This will be the first emergence of the principle of planning by division, and this is about as far as the primitive tribe will get. In the main the tribal architects will still plan by the method of congregation.

Contrast with such a hut-group the plan of a modern twelve-roomed bungalow. The modern bungalow will probably have but a single span of roof; its only structural walls will be its external walls. Architecturally it will be not twelve units juxtaposed one to the other, but one unit divided into twelve sections. Its planning will be done entirely by means of partition-walls—in other words, by the method of division.

I think that now if we return to our question, "What is it which has made so great a difference between ancient and modern conditions?" in the relation of plan to elevation, we may perhaps find an answer. The difference is, surely, that ancient plans are congregations of simple units, whereas modern plans are generally either compound—that is, subdivided—units or congregations of such units; compound units because if one roof covers several rooms of which the external walls are continuous, these rooms lose much of their individuality and become merely divisions of the larger unit defined by the roof.

Now the expression of plan in elevation can never be more detailed than the expression of the units of which the plan is composed. Yet the divisions of a unit will appear internally as separate rooms, each demanding a certain position for its window or windows, which position may not be at all that demanded by the unit as a whole. Architecture speaks in terms of structure and of ornament; partition-walls are by their nature neither structural nor ornamental, and there is no word for them in the language of architectural form. Since we cannot reveal them as causes, we must often juggle away their effects. The architectural vocabulary is limited, and capable only of the description of things of architectural interest. What are these things? What is it in a plan which we can hope to express in an elevation?

Before trying to answer this question let us clear the ground by eliminating some, at any rate, of the things which are clearly inexpressible. Most of these will have one quality in common: they will be produced by causes which are not architectural. Foremost among these nowadays will be the need for cheapness. Cheapness and dearness have nothing to do with architecture; they are facts incapable of æsthetic expression. When we say that a thing "looks cheap" we mean that it resembles things which we know to be cheap, but we do not know whether it actually was cheap or whether its manufacturer made four hundred per cent. profit by its sale. Most of us would say that a wall of Fletton bricks "looked cheap" even if we encountered it in the middle of China, where it probably would be extremely dear. Cheap or dear, it would still be very ugly; its money value may depend upon circumstance, but its ugliness is inherent. It is impossible that absolute values such as those of beauty in architecture should be at the mercy of the accidental values of the market. The eye knows nothing, for instance, of roof being cheaper than wall, and an over-big roof loses none of its unsightliness by providing an extra storey at the minimum of expense. Similarly, it is impossible to express architecturally the fact that, although the spacing of the façade demands that this room be thirty feet long, twenty-eight will have to do. The need for economy is a temporary thing, a need which has or has not been satisfied once and for all when a building has been paid for, and which from that moment ceases either to excuse or to accuse the design. It is a power, generally unfriendly, neutral at best, with which the designer must treat, but from which he can expect no help. Beauty is not thrift, nor thrift beauty.

Another thing architecturally inexpressible is the irregularity caused in a compound plan by the orientation of the building, the windows placed abnormally in rooms in order that they may catch the most sunlight, or perhaps that they may avoid it. South windows in corner rooms and north lights in studios often rob one elevation to over-window another, and the reason of their so doing cannot be made apparent to the eye. The demand of the Education authorities for left-handed lighting in class-rooms will play great havoc with the elevation of schools—do we not all know it?

Again, the more important rooms in a civic building, those rooms which should be immediately accessible from the front entrance, and should above all be revealed upon the façade, may be compulsorily banished to the back of the site, where only can they be out of the sound of traffic. The elevation cannot explain this.

Does it not seem then that a plan can actually be productive of beauty only when it is absolutely the best plan for its purpose, without regard to peculiarities of position or the necessity of cheapness? I think that this is so. Moreover, as I have said, architecture can only express architectural things, and the architectural things in a plan which are worth expressing are simple and few. They are, however, extremely important.

First, unless the whole plan be in itself the unit, there are the units of which the design is composed and the manner of their combination.

Next there are the relative size and importance of these units one with the other.

Then there are the distinctions in kind between these units, between rooms and communications, between places of state and those of daily use, between rooms for

men and storerooms for things. Storerooms for things may not seem very susceptible of architectural expression, but they may be so none the less. I remember being delighted once by the effect, in a noble design for a hospital, of a long frieze of small shuttered openings contrasting with the large shutterless windows of the wards. These openings lighted a mezzanine composed entirely of larders.

Then, again, if we regard, as we should, the section of a building as the inevitable outcome of its plan, the elevation will owe indirectly to the plan its horizontal divisions, whether continuous or broken by staircases, mezzanines, or raised pavilions.

Chimneys, too, must be placed to suit party-walls, and a roof ridge will suggest the mid-line of the space which it covers.

Large and important spaces buried deep in the plan may reveal themselves externally by their dominating roofs or domes. The roof plan of a building is usually the one plan in the making of which the architect fancies himself free of all æsthetic obligations. If in the future travelling by air becomes general, a good many architectural reputations will be blasted.

I think that most of the facts of plan which are expressible and worth expressing come under one or other of the headings which I have just run through. Such facts are the matter of expression. Let me give a caution here concerning its manner. A feature may be expressible in many ways, but, having chosen one way, you must stick to it for all similar features. Otherwise your expression is false, since you imply distinctions which do not exist. To speak of an infant mammal and a baby biped would not be a good way of describing twins.

Let me, also, at this juncture insist once again upon this distinction between the appeal to the understanding and the appeal to the eye. You actually hear it said nowadays that fitness for its purpose is the highest beauty in a work of architecture. I suppose that the prophets of this doctrine consider that military march the best music which makes the most noise with the least expenditure of breath, and esteem all faces equally beautiful which have eyes, nose, and mouth in good working order. No: the truth seems to be this and no more: that architecture founded upon facts of plan and structure is not necessarily beautiful, but that the odds against it in the race for beauty are much lighter than those against architecture arbitrarily invented. Also, that since nobody could wish every building we rear, for whatever purpose, to be of one pattern, we must differentiate one from another somehow; and that it is far simpler to let each building take its natural and proper shape than to impose upon it some conventional and artificial distinction. Some people's way of expressing civic state in a block of municipal offices seems to be by hiding the plan within perfectly featureless walls and then plastering a peristyle all round it. Such folk remind me of dealers who deodorise home-spun tweed and then sprinkle over it the scent of peat-smoke out of a bottle.

In short, although I do not say that truth is beauty, I do say that honesty is the best policy. Let us now try to see the bearing of this maxim upon everyday practice.

There is a phrase much used by theatrical critics which will, I think, suggest to us a profitable train of thought. That phrase is "the 'scène-a-faire'"; the obligatory scene, without which the author's choice of characters and story would not be justified. In a play about jealousy, for example, we expect to see the husband and the lover confront each other in the presence of the wife unless it be made plain to us that there is a strong dramatic reason why this situation must not be brought about. So in a building there is often something which must be displayed if the proper character of the design is to be developed. What this something is should be the architect's first thought in making his design.

Often the obligatory feature will be a large room appearing upon the principal elevation. This room will be given windows larger, and ornaments richer, than those given to the rest of the façade. Its limits may be defined by the projection or the recessing of its front wall. It should *not* be hidden behind the upper part of the entrance portico, nor should it form the middle storey of a frontispiece of which the equally enriched upper storey contains the caretaker's bedrooms.

If the large room appear on a flank or rear elevation, it may be possible to give it place in the front view of the building by emphasising its roof. If it be buried in the midst of the building, this can still sometimes be done. It has often, and I think justly, been said that the two houses of assembly in the Palace of Westminster ought visibly to have overtopped the buildings which surround them.

In a theatre the stage and the auditorium generally take the law into their own hands and force themselves upon the attention of the public.

In a church the obligatory feature is the place for the high altar. It is true that the mediæval cathedral quire in which the high altar stood was often overshadowed by a central tower built over what was nothing but a passage-way between screens. The mediæval cathedral, however, was two buildings—quire and nave—which might be separated by a tower; the modern cathedral or church is one. It seems certain that the best place æsthetically for the chief altar of a domical church is under the dome, whether the dome be central as at St. Peter's or placed at one end of the church as Sta. Maria dei Miracoli at Venice. A tower differs from a dome in that it calls attention to itself rather than to that which it covers. I think, therefore, that to make the place for the high altar the bottom storey of an eastern tower would be likely to result in concealing rather than revealing our obligatory feature.

It would be vain for me to attempt here to catalogue all the various other kinds of buildings which the architect may be called upon to design and to give my opinion as to what in each is the obligatory feature, and I must satisfy myself with mentioning a few. In a hospital the administrative block should, I think, be the clue to the design, in a company's offices the board-room. In any building containing an assembly hall there is unlikely to be any other feature which can compete with it for prominence. In a fire station it is not the look-out which is the most important feature in these days of telephones, but the engine-house. In a shop there should be no escaping the allurements of the entrances, broad gates tempting the doubting customer to her ruin. Places of worship other than churches should manifest by their form whether they are intended as auditories for preaching or as temples enshrining mysteries. In warehouses it seems a pity not to insist architecturally upon the manner in which goods are raised to the upper floors. In each and all of these the obligatory feature is likely under normal conditions to be expressed easily enough. Once its pre-eminence is assured, the architect must consider which of the remaining features of his design to express and which to suppress.

Now, as I see it, Architecture is wise in wearing sometimes the mask of the *bal masqué*, but never the mask of the pantomime ; she may conceal her features, but she had better not put on a false nose. I have spoken already of occasions on which the architect may reject the suggestions of his plan and may make his elevation " a decorative façade of a purely non-committal kind." By this phrase I meant a façade of which all the features, whether projections or recesses, piers or openings, pilasters or entablatures, justified themselves to the eye without implying any external cause of their presence. It will generally be found that there must be stretches of such non-committal design even in those elevations upon which the more important features of the plan are strongly impressed. In these subordinate parts the pattern of the pierced wall which is the external surface of the building need not be interrupted by any extrusions from within. This pattern, however, must be chosen scrupulously that it may fit as well as possible the structure which it is to cover. There is really no excuse for such practices as that of the brothers Adam when they veneered blocks of houses with façades of which the windows played hit-and-miss with the party-walls and the floors. The most absurd example of such a proceeding which I know of is of recent date and is to be found in a hospital in London. To this hospital there has been made an addition of the same total height as, but divided into more storeys than, the old building. Without securing any symmetry thereby, the architect of the new block has adopted without modification the ordonnance of the old façade, thus causing the floors to cross the windows and the interior to be lighted in the most extraordinary way imaginable. This example is perhaps without parallel, in that there appears no comprehensible architectural motive in the arrangement ; examples are numerous, however, in which the temptation which has led to the crime can be clearly seen. All the same, a crime it is, and one which no provocation can excuse.

I do not mean by this that it is never allowable to run a floor through a window or to place a window where it is blocked by a cross-wall. The crime which I have condemned is the choice of any other architectural pattern for an elevation than that which fits the plan best. No pattern is likely to fit a complicated plan absolutely ; and if people insist on taking our elevations as an oath, they are certain to detect us in some little perjuries. On the other hand, not to make a pattern at all is to refuse to reveal the order which must be the dominating quality in every good plan, and the loss of this expression is far more damaging to truth than are a few little fibs. It is only the dumb who never lie.

It seems, then, that an elevation normally will consist of what in heraldry would be called charges and field ; that the charges should be the architectural expression of important features in the plan, and that the field should be a background to these ; a veil hiding those features of the plan which we consider relatively unimportant. The " non-committal " type of façade to which I have referred will simply be field without charges. The field may be nothing more than plain wall, as it is at the Panthéon in Paris, but it will commonly be pierced with holes in a pattern—that is to say, with windows and doors regularly arranged. It may be as much ornamented as at our Houses of Parliament, or as little as at Chelsea Hospital. Furthermore, its pattern may suggest its structure by visible piers, arches and the like, or it may be purely unarchitectural, as in the painted houses of the German Renaissance. Supposing the field to be patterned all over, with the mimic structure of Palladianism, with rustication and pilastered orders, with pediments and window dressings, the architect must take especial care to keep in reserve sufficient relative emphasis for the charges.

When I said that the decision of what was the obligatory feature should be the architect's first thought in making a design, I assumed that an earlier and more important decision was an integral part of this one—I mean the decision as to what was to be the unit of the whole design, whether a part of a room, a single room, or, as is almost invariable nowadays, a group of rooms. The group of rooms is our old friend the compound unit, and may be regarded architecturally as a single space divided by walls in much the same way as a cloakroom or changing-room is divided by partitions—that is to say, a divided unit of which the windows are related rather to the whole than to the divisions ; in short, a place in which, as one would say colloquially, the partitions had been " put in after." Such a compound unit

will also generally be divided horizontally by floors, since its height, if proportionate to its area, will be greatly in excess of the height desirable for its divisions. Therefore, if the unit be decorated by an external order, this order may reasonably embrace two or more storeys of windows, although of course the unit may with equal reason be decorated by the application of an order to each storey, in which case the upper orders become separate units in superposition.

The architect, having decided upon his unit, next must determine the obligatory feature in his elevation, must choose which subordinate features he wishes to show, and must veil the rest of his design with a background to these features. A very good way of testing the correct relation of an elevation to its plan is to set up the front wall both in plan and in section, and to produce inwards the lines of all important returns in plan and horizontal projections of cornices in elevation. If the lines thus produced from the plan coincide with those of the important cross-walls, and if the lines produced from the elevation hit off the floors, the plan and the elevation are on good terms one with the other. If, further than this, the silhouette of the roofs and the massing of the ornament reveal truthfully the relative honour and importance of the various parts of the building, we may under such conditions affirm absolutely Huyot's dogma that a good plan makes a good elevation.

It has not been my business to-day to give you my opinion of what constitutes a good plan, nor has it been my business to put forward any absolute standards of criticism by which we may judge elevations. My theme has been the relation of the one to the other, and my justification for the choice of that theme lies in the dogma of Huyot which I have just quoted. If, given certain interrelations, a good plan makes a good elevation, it is plainly to the interest of the architect to study how those interrelations may be attained. It is to that study that I have attempted to make a small contribution. It appears to me that in the common practice of my countrymen, amid much laudable and successful effort toward rational and harmonious designing, there are two little superstitions in particular which often lead to failure. These I have reserved to the last, and these I now propose to put before you.

The first is a belief in the magical properties of symmetry. If an emphasised feature occurs at one end only of a building, it must be counterfeited at the other. Why? Symmetry is a good thing if a plan falls symmetrically, otherwise it is vanity. The flank of a building is often naturally unsymmetrical; the human head in profile has not got a nose on both sides. The front and back of a building will normally be symmetrical if the plan is well studied, but two symmetrical elevations are enough for any building of ordinary constitution. In a street building it may be the flank which shows. Study the practice of the French in this matter, particularly in the façades of their blocks of flats. If two flats appear on the frontage, the street front will be symmetrical; if only one appear, it will seldom be so. Consequently the rooms of the French flats will generally be symmetrical internally, whereas with us the cross-walls will come anyhow in relation to the windows.

The second superstition, and the last thing with which I shall trespass upon your patience, is a dread lest the ends of our street façades should look weak. If a plan be divided evenly into bays, there will be between the end window and the limit of the façade only half the breadth of a pier plus half the breadth of a party-wall. This will be sufficient, in plenty, for the profiling of any reasonable window dressings and the accommodation of a down-pipe. In a street building, where our front wall is flush with those of our neighbours, what more can we want? Apparently, to judge from their practice, many architects want a great deal more; they want room for coupled pilasters or for rusticated piers or for some other feature of the kind. In order to secure these massive corners, the spacing of the remainder of the façade is crowded together and dislocated, the windows are placed eccentrically in the rooms, and often enough the end rooms are insufficiently lighted. This illogical practice is a typical product of paper architecture. A street façade is in effect merely a certain length of frontage; on paper it appears as an isolated design. Where a building stands free the corner rooms gain light from two directions; it is therefore logical that, since they are doubly windowed, their windows themselves should be smaller and more widely spaced than those elsewhere in the elevations. In a building joined on either side to other buildings the end rooms have no advantage in lighting over the middle ones, and it seems to me illogical in the extreme to sacrifice their fenestration to any convention in the design of the façades.

With this note I must end my lecture, not because I have come to the end of what I would like to say upon the subject, but because I have got as far as I can go without embarking upon the endless study of things of detail. I believe most firmly myself in the importance of a close relation between plan and elevation in architecture, and I have tried to put my reasons for this belief before you. I have further tried to show how this close relation may be attained. If I have succeeded in any small degree in clearing the way for your deliberations on this subject, I shall have done all that I have hoped to do, and all that a lecturer has any right to attempt.

The Class-room in School Planning

By Elwin H. T. Nash, D.P.H.,

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As a School Medical Officer, particularly interested in school planning, and a member of the Joint Committee on School Lighting to which Mr. Widdows referred, I wish to pay my tribute to the immense value of Mr. Widdows' work in forwarding the progress of school planning. Those of us who look at the school from the point of view of a School Medical Officer have been in recent years somewhat critical of many designs, in that they have not started from the point which Mr. Widdows emphasises—namely, the class-room.

In spite of what Mr. Widdows says, it appears to be important to evolve the ideal class-room now as a basis for design. If we have an ideal, we can always improve it in the light of future work. There appear to be several matters of importance which are overlooked by architects in designing the class-room. It must be borne in mind that the class-room is the place in which the child spends the greater part of its school life, and although the design of a school as a whole may be left to a large extent as a matter for individual research, it should start from a more or less agreed design of class-room. It must not be forgotten that, whereas Mr. Widdows in his paper and all his writings postulates a single-storeyed building, in large towns and congested areas it will not be possible to carry out that ideal, particularly at the present time, owing to expense of sites, and we shall be faced for some time to come with the two- and three-storeyed building, which will have to be modified in the light of Mr. Widdows' suggestions.

With regard to ventilation, one is struck by the fact that the epoch-making researches of Professor Hill are not common knowledge amongst some of the leading lights in the architectural world, as their influence on the design from the point of view of ventilation must be very large. This brings us up against the difficulty of securing through ventilation on what one may call the corridor wall of the class-room. Windows on this wall, if under the verandah, which is the usual method of dealing with these single-storeyed schools (and will have to be much the same in two- or three-storeyed schools), are useless from the point of view of lighting, because the amount of light which is admitted beneath the verandah is actually less on the desk adjacent to the wall than it would be from a reflecting wall, and would, I presume, also be less than from a light-coloured wall with impervious hoppers painted a similar colour to the wall. The value of the reflection from this corridor wall has never been sufficiently realised, nor had its figures been measured, as far as I can ascertain, until I published my report on school lighting, in which I showed that in a series of class-rooms identically the same size, half of which opened on to a hall with windows for the purpose of borrowing light, the other half having merely a solid wall, and all the rooms being Durescoed pale stone colour, the proportion of light in the class-rooms without windows, on the desks against the "corridor" wall, was as 5·5 foot-candles, compared with 4 foot-candles in the class-rooms with the windows adjoining the hall of a Ben Jonson type school.

The importance of the properly designed hopper makes an immense difference to the question of complaints of draughts from the children, and so leads to less likelihood of the closure of this important means of ventilation.

It would have been interesting to have heard if Mr. Widdows has made any smoke experiments with the Chaddock window, and, if so, what opinion he has arrived at with regard to it.

With regard to lighting, it seems important that we should establish whether or not the principle of bilateral lighting, which has been regarded as unsatisfactory for so long, should be accepted, or whether the design should concentrate on left lateral lighting. In view of the smaller classes and improved design, it should be possible adequately to light any class-room from the left; and there is no doubt that, from the point of view of writing and drawing, the absence of conflicting shadows is an immense comfort. If this can be obtained, and at the same time through ventilation, it is a question whether this should not be the ideal to strive for.

One is particularly glad to see Mr. Widdows accentuating the point which one has been hammering at for years—namely, the abolition of the glazed partition. There is not one good point to be made for glazed partitions; so much so that one will be inclined to regard it as a sign of incompetence to find glazed partitions in any future design. The drawbacks of the glazed partition are (1) noise; (2) absence of privacy; (3) the particular drawback which Mr. Widdows has emphasised—viz., that the light comes at an acute angle in the eyes of the pupils of a large portion of the class-room; (4) in the majority of cases after a short time they become ill-fitting and cause a draughty room; (5) that it is impossible to fix a blackboard to them. If it is thought necessary, and this should be on the rarest possible occasions, that it should be possible to throw two class-rooms into one, any partition should be of wood and should be coloured in the same manner as the walls of the room, and, further, the surface should be flat on either side if possible. It might almost be laid down as an axiom that no school

with a hall should have a movable partition separating two class-rooms.

With regard to glazing, it should be an absolute *sine qua non* that no class-room should be spoilt by the attempt to borrow lights for or from a hall, particularly of the Ben Jonson type, as windows effect no useful purpose either in the class-room or in the hall, and spoil both by tending to make the class-room less soundproof and spoiling the general effect of privacy. With respect to glazing, I have still to understand why it is necessary to glaze the doors to a class-room as is so frequently done. As Mr. Widdows points out, we have long passed the day when it is necessary for the head teacher to be peering into every class-room in order to maintain discipline. Whilst on the question of doors, one may call attention to a little matter of oversight one has seen on more than one occasion, in that highly artistic doors have been put in infant departments where the handles have been put at such a height that few of the children were able to reach them.

I notice Mr. Widdows in his diagram places the movable blackboard practically in the centre of the room. It may be the custom in Derbyshire, but it is certainly not the custom in most schools where movable blackboards are in use; the usual place being considerably nearer the door, the board generally being put there with the idea that at that angle more light is thrown upon it. They are also generally found much nearer the front desk, and on many occasions I have found that the children in the two front desks have been unable to see owing to the board appearing shiny, due to reflected light. It should be, in my opinion, a standard thing in all class-rooms that the blackboard should be fixed on the facing wall. Unless there is a special window, as in Christ's Hospital, Horsham, it is as well not to take it to within two or three feet of the window wall. What is found so often in class-rooms in elementary schools is that the room is dominated by that abomination the store cupboard. This is found either between the teacher's desk and the door or between the teacher's desk and the window, the best lit part of the facing wall. Surely the difficulty can be got over by the incorporation in the original plans of a 3 ft. 6 in. cupboard with sliding doors, running from the window wall the whole length of the facing wall with the exception of four or five feet near the door; the blackboard can be then placed over this and will be quite accessible and well lit. This would give sufficient storage room for all the books and apparatus required, and would not in any way spoil the class-room, as there is, as a rule, sufficient room between the teacher's desk and the wall. There is no comparison between the room with such a form of cupboard and one in which those store cupboards supplied by the educational firms are in existence. Further, there should be no necessity for buttresses of any kind in a facing wall; it should be an axiom in class-room designing that the facing wall should be absolutely flat. Movable blackboards have been rendered necessary in many cases owing to the class-rooms having irregular facing walls or glazed partitions.

There is another important point in class-room designing—" banking," which was introduced with the idea that it facilitates the teacher seeing every child's face. In the old class-rooms of 60 or more there was something to be said for it, but even then the whole difficulty might be got over by raising the teacher on a small platform. Banking is now unnecessary, and it is not conducive to cleanliness of the rooms owing to the difficulty in moving the desks.

With regard to artificial lighting, I see Mr. Widdows fixes the height of his lights at 8 feet 3 inches, and also advises prismatic globes. This violates the recommendation of the Joint Committee " that no lamps should come within a solid angle subtended at the eye by the blackboard and a space 2 feet above it, unless they are completely screened from the eye by a shade impervious to light. In general it is desirable that no incandescent surface should be visible to the eyes of students or teachers while carrying on their ordinary work."

In practically every instance with a fixed blackboard on the facing wall, the front row of lights at a distance of 8 feet 3 inches from the floor will come within this solid angle. There is another point which has been brought about by the introduction of the gas-filled lamp, even when the source of lighting is actually screened by an impervious shade, which is that, owing to the high illuminating power of the source of light, there is a difficulty in seeing when this comes within the solid angle referred to. The same applies to the present high-power gas units. A very good instance of this came under my notice comparatively recently, where I was asked to report on the relighting by gas of a large school. It was practically impossible to see anything on the upper part of the blackboard owing to this glare produced by the high-power units within this solid angle, although the incandescent surface was shaded. There is likely to be considerable difficulty with glare in the installation of this new high-power gas unit as well as gas-filled lamps, and particularly at the present time owing to the strenuous demand for economy, where comfort of the pupil is likely to be sacrificed to the fact that the light varies inversely as the square of the distance. If it is either necessary or the most comfortable to have left lateral lighting, I cannot see why, if this is desirable in daylight, it is not also desirable as far as it can be obtained with artificial light. In the experimental lighting of some schools which I carried out in 1912, I placed the new lights to get this result as far as possible. The lights were placed in the following manner: the first row was placed 1 foot from the window

wall, thus making the greatest use of the value of the reflected light from the wall, the next row was placed 7 feet 8 inches from the first, and the next row 9 feet 2 inches from this one, leaving in the particular class-rooms the space of 5 feet 9 inches between the last row and the corridor wall. This practically abolished right-hand shadows.

With regard to heating, one is waiting to see some further development of the steam-heating system of Mr. Widdows, or possibly the duct-heating system as mentioned by Mr. Gilbert Scott. One thing which we, as School Medical Officers, have to face in poor districts is the pride of the poor parents who insist on their children coming to school in boots. These boots often have the uppers just holding together and the soles full of holes, the children in wet weather arriving at school with not only their boots but their stockings sopping wet. With our ordinary methods of heating and ventilation, it is a long time before these children get their feet warm ; in fact, often they do not get warm throughout the session. This is a fertile source of illness. Where the children come to school with bare feet, within a few minutes their feet are dry and they are fairly comfortable ; but unfortunately the parental pride insists on boots being worn which are really a constant menace to their children's health. With this type of child one can conceive that their prospects of warmth would be infinitely greater under the heating systems advocated by Mr. Widdows and Mr. Scott.

There is one point with regard to designing single-storeyed buildings that seems to be mainly used on account of its architectural amenities, which is the use of a central dormer in the case of three-window and a single one in the case of two-window class-rooms. In these cases the other window or windows are not carried up to within 18 inches or 2 feet of the ceiling, which makes for poor lighting in the farther part of the room which that particular window supplies. This particular architectural device starves the lighting of the row of desks along the corridor wall.

I differ from the speaker who stated that " he did not see a school that might not have been the result of an extremely successfully conducted competition." Mr. Widdows' work has been so far in advance of current thought and design that I am sure few of his designs would have been placed in the winning position if judged by committees or assessors anxious to do the safe thing.

So important do we School Medical Officers consider this evolution of the ideal class-room that we are asking Mr. Widdows to open a discussion with the idea of inviting criticism, so that we may get as near as possible to what is considered from architectural, hygienic and scholastic point of view the ideal class-room.

Personally I wait with great interest the design of a three-storeyed school by Mr. Widdows for a site in some congested area.

Reviews

LA SCULPTURE À L'ÉGLISE DE BROU. *By Victor de Mestral Combrement.* [*Paris, C. Massin.*]

The church of Brou is the last splendid effort of Gothic architecture in France, the result of a single impulse, begun in 1505 and entirely finished in twenty-seven years under the guidance of a most cultivated woman, Marguerite d'Autriche, widow of Philibert le Beau, Duc de Savoie.

One of the " Petites monographies des grands édifices de la France " is devoted to its general description, and the present finely illustrated work treats of the sculpture which adorns it, and in particular of the superb " Retable des Sept-Joies " of the tombs of Philibert and Marguerite and of his mother, Marguerite de Bourbon. It is a conventual church, not very large—the nave is just under 33 feet wide—and its chief peculiarity is the almost entire absence of Renaissance influence in the ornament, except in the woodwork ; indeed, it is difficult to realise that Germain Pilon and Jean Goujon were working in Paris while it was building.

Marguerite d'Autriche, who was brought up at Brussels, confided the work to Van Boghem, master-mason of that place, who brought his assistants with him, so that the design is rather Flemish than French.

The architecture seems to show a revulsion from the flamboyant extravagance of the fifteenth century ; the interior in particular is sober and almost austere in effect, and this is heightened by the hard white stone employed, which time has scarcely coloured.

An examination of the jointing seems to show that the working of the stone was done on the banker, and not after fixing, as usual in France.

This must have necessitated elaborate drawings, and we are told that Van Room, of Brussels, who designed the tomb of Philibert, supplied full-size drawings for it.

The carving is very naturalistic in character, and extraordinarily dexterous in execution, the deep undercutting recalling often the woodcarving of Grinling Gibbons.

All the effigies, and probably also the charming little angels, were the work of Conrad Meyt, a Swiss sculptor, and compare not unfavourably with the best work of the Italian Cinquecento artists.

CHARLES E. SAYER [*A.*].

PLOUGHSHARE AND PRUNING HOOK. *By Laurence Housman. Lond. 6s.* [*The Swarthmore Press, Ltd.*]

Laurence Housman's *Ploughshare and Pruning Hook* consists of ten lectures on a variety of subjects, and contains much which, as the author suggests in his

preface, will be unwelcome to some of his readers. Its claim to the attention of architects, as architects, is the inclusion of the two essays, " Use and Ornament (or the Art of Living) " and " Art and Citizenship."

In the latter Mr. Housman pleads, among other things, for the well-designed article made to last, as opposed to the ill-designed article apparently deliberately made to break down at some crucial point before the rest is worn out. He even states that " in the majority of houses whose cold water systems I have inspected the pipes are nearly always run at the most exposed angle of the containing walls, so that if there is a frost, the frost may have a chance of getting at the pipes and bursting them, and so give the trade a fresh job." Of course, if Mr. Housman writes like this, he cannot well expect *everyone* to welcome his efforts !

Mr. Housman sees hope for better things in the fact that some of the new poor " have come back to manual labour in various forms, in farming, in horticulture and in craftsmanship, and are bringing, presumably, their standard of honour to bear on those trades on which they no longer foolishly look down." It is not, however, suggested that any of these worthy people have had the good fortune to become plumbers.

In " Use and Ornament (or the Art of Living) " an attempt is made to demonstrate the utility of beauty. It is not a new theme, but it is well tackled, and the tackling of it is opportune.

" To that end—man's enjoyment of life—all art is profoundly useful, . . . but it is usefulness extended in a new direction ; leaving the material uses, by which ordinary values are measured, it shifts to the spiritual ; and by the spiritual I mean that which animates, vitalises, socialises.

" To that end it may often be . . . that, in the material sense, art is a useless addition or refinement upon that which was first planned merely for the service of a man's bodily needs. Yet where the need is of a worthy and genuine kind, art never ceases to rejoice at the use that is underlying it. This can be clearly seen in architecture, where the beauty of the design, the proportion, the capacity of the edifice—though far transcending the physical need which called it into being—remain nevertheless in subtle relation thereto, and give to it a new expression—useless indeed to the body—but of this use to the mind, that it awakens, kindles, enlivens, sensitises—making it to be in some sort creative, by perception of and response to the creative purpose which evoked that form. You cannot enter a cathedral without becoming aware that its embracing proportions mean something far more than the mere capacity to hold a crowd ; its end and aim are to inspire in that crowd a certain mental attitude, a spiritual apprehension—to draw many minds into harmony, and so to make them one—a really tremendous fact when successfully achieved."

As architects we may well thank Mr. Housman for his attitude towards our much misunderstood art. If we do not like some of the views expressed in his other essays, we shall at least agree that they are sincere and stimulating. The little bit about the water pipes does not really trouble us at all, for we have the consolation of knowing that had the author inspected the houses which *we* have designed, he would have come to quite a different conclusion.

W. S. PURCHON [*A.*].

The Library

NOTES BY MEMBERS OF THE LITERATURE COMMITTEE ON RECENT ACQUISITIONS.

[*These Notes are published without prejudice to a further and more detailed criticism.*]

ACADEMY ARCHITECTURE AND ARCHITECTURAL REVIEW. By A. E. Martin-Kaye. Vols. 52 and 53. Sm. 4o, Lond. 1921. 10s. each. [B. T. Batsford, Ltd., 94 High Holborn, W.C.]

A useful publication for those who wish to know what is being done in the way of building and decoration, especially if they are interested in the name of the firm who " supplied the chintzes."

C. E. S.

GREEK ART. By H. B. Walters. 5th ed. 8o, Lond. [1914] [Methuen & Co., Ltd., 36 Essex Street, W.C.]

A little book which will be useful to students in the study of Greek architecture. It deals briefly with architecture, painting, vases, bronze work, terra-cottas, gems and coins and contains a useful chronological scheme of Greek art.

H. C. B.

OPERA MATHEMATICA OU ŒUVRES MATHEMATICQUES, ETC. Par Samuel Marolois. ob. fo, Amsterdam. 1625-27.

This is a very curious work by a little known Flemish or Dutch author treating of geometry, perspective, fortification and architecture. It incorporates a treatise on the Orders by Henry Hondius of The Hague (1573-1610), published in 1620, and is profusely illustrated with fine engravings by Vredeman de Vries.

W. H. W.

LOCKWOOD'S BUILDER'S, ARCHITECT'S, CONTRACTOR'S AND ENGINEER'S PRICE BOOK FOR 1922. Edited by J. P. Allen. With a supplement containing the London Building Acts 1894–1909 and other enactments relating to buildings in the Metropolis, with the by-laws and other regulations now in force. Notes on all important decisions in the Superior Courts and Index to the Acts and Regulations. 8o, Lond. 1922. 7s. 6d. [Crosby Lockwood and Son.]

ILLUMINATED MANUSCRIPTS. By John W. Bradley. 2nd edition. 16mo, 1921. 5s. [London: Methuen and Co., Ltd.]

ENAMELS. By Mrs. Nelson Dawson. 2nd edition. 16mo, 1921. 5s. net. [London : Methuen and Co., Ltd.]

DALMATIENS ARCHITEKTUR UND PLASTIK. By Cirillo M. Iveković. 5 vols. in 4 portfolios. Vienna. [n. d.] [Wien : Verlag von Anton Schroll and Co]

Correspondence

ARCHITECTURAL EDUCATION.

11 *Suffolk Street, Pall Mall, S.W.*
24 *February* 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—It is to be hoped that Mr. Collcutt's recent address to the R.I.B.A. upon education, and the opinions it evoked, may rouse the latent forces of the Royal Institute in regard to the future outlook.

Ever since I was a student at the A.A. under the voluntary system, and a member of the A.A. Council for some years about the time the Day School was established, I have advocated, although not in the limelight, that the recognition by the Institute of scientific attainment and its practice in combination with art should be welcomed and not regarded as superfluous, which I venture to think it has too largely been for at least the last half-century. It has not been so regarded in America during that period, and hence I think architecture has benefited in that country.

It is, therefore, hopeful to find such a great authority as Sir Aston Webb expressing a favourable opinion upon this combination in the following words, which I trust may bear early fruit :—

" You say we must not worship Wren too much ; no doubt we ought not to, but anybody who studies St. Paul's must worship him. He was a President of the Royal Society—I think he was its first President ; he was a highly scientific man and a great astronomer, and certainly he was the greatest architect that England has ever turned out. So it does not show at all, I think, that because a man is instructed in mechanics, in engineering and such-like, that he need not also be the very finest and most artistic architect."

Scientific knowledge, combined with art, was surely on a high pinnacle when all the great historical buildings were erected such as St. Paul's, Notre Dame, St. Peter's, the Pantheon, Santa Sophia, the Parthenon, the Temple at Karnak, etc.

I again suggest, therefore, that recognition of this principle by the Institute, and its general adoption by the Board of Architectural Education and all students, would confer great and lasting good upon architecture, architects, the Institute and the public. I agree that outstanding creative artists probably possess natal endowment, and that they are rare ; so I would suggest a modification of the well-supported theory, " artists are born not made."

As the range of artistic and scientific attainment is so wide, I think it would be more accurate to say :—

True artists are born, not made.

True scientists are born, not made.

True architects are born artists and scientists.

I, however, yield to none a greater appreciation of the fact that the finest art is the acme of architectural design as produced by the five essentials—sound construction, scale, proportion, fitness and beauty. I submit that architecture thus conceived should attain the highest merit.

I constantly observe in modern architectural practice the necessity for a wider scope of knowledge and equipment than the fashionable narrow one which is limited to superficial æsthetics, and some of it might be innate, but much could be acquired. It is, moreover, in the future of this democratic world that our students will have to serve the public, and not alone in the easier paths of past ages. For instance, it can hardly be denied that a knowledge of geology is advantageous for the design and the life of modern buildings, the benefits of which I have myself experienced. Probably, however, nothing human can be quite perfect ; and I think if Sir Christopher Wren had been as well versed in geology as he was in astronomy, much of the present trouble in regard to St. Paul's Cathedral would not exist.

It appears to me that the " gloomy " outlook for architects in this country is now clearing, and a dawn is at last breaking ; but the field will not be limitless, and I think the fully equipped will prove the most successful, provided always that their knowledge be dominated by true art. May I suggest, therefore, that if the standard and scope of architectural education and the qualifications for architects were increased rather than diminished, the art of architecture would probably benefit in a like degree.—I am, sir, your obedient servant,

JOHN MURRAY [*F.*].

ARCHITECTS' LANDSCAPES AND TREES.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I listened very attentively to Professor Rothenstein when he recently delivered his address on Architectural Draughtsmanship. Of course I enjoyed his remarks very much, though the examples which were displayed on the screen of modern drawings seemed to me, as Mr. Chalton Bradshaw remarked (in seconding the vote of thanks), pretty " much like back numbers which very few of those present could admire." The slide shown of Norman Shaw's draughtsmanship was badly yellow-stained and most unfortunate. I am familiar with the original. The lecturer told us that Shaw would have been better advised had he employed someone else " to put in his trees and bits of landscape " because as it was " they scarcely appear to a student of art to be drawn by a contemporary of Watts, Burne-Jones or William Morris." The Professor prefaced his lecture by a foreword to the effect that possibly we might not as architects comprehend what he was driving at. Certainly I must admit that I fail to see the drift of this allusion to " Watts, Burne-Jones or William Morris " in connection with architectural perspectives

by Norman Shaw. It all depends, I suppose, upon how one judges the pictorial rendering of architecture and drawings of buildings. May I, however, add that Norman Shaw did precisely what Professor Rothenstein blames him for not doing, inasmuch as Shaw often did employ someone else to "put in his trees and bits of landscape" to his perspectives.

MAURICE B. ADAMS [*F.*].

PROPAGANDA AND PUBLICITY.

34 *George Street, Hull,*
18 *February* 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Permit me to make three suggestions :—

1. That an announcement be made by the Council, from time to time, in the Press, to the effect that members of the R.I.B.A. do not advertise.

2. That the principal Free Libraries be supplied with a copy of the JOURNAL and the Kalendar.

3. That the significance of our initials be indicated to the editors of the more important works of reference.

Extraordinary as it may appear, I have seen the announcement of the birth of a child to a member of the Institute classified under the distinctive surname Ariba.—Yours faithfully,

DUDLEY HARBRON [*F.*].

PUGIN STUDENTSHIP.

40 *Gunterstone Road, W.*14.
6 *February* 1922.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The JOURNAL of 28 January contains the announcement that no drawings have been submitted for the Pugin Studentship this year.

The writer would submit that this fact constitutes a reflection on Architectural Education, and should be taken to heart by those concerned therein. The inference seems to be that present-day students are apathetic towards the mediæval architecture of our own country—the beautiful traditional style of England which, if it may not rival contemporary work on the Continent for size and grandeur in its larger buildings, is yet unrivalled throughout the world for sheer grace and loveliness.

Surely those responsible for the curriculum of British Architectural Schools cannot believe that in the study of architectural history the Classic Orders and the Renascence are all that are really worthy of serious consideration ; and if so, surely the students themselves—Englishmen for the most part, and brought up in the knowledge and love of their country—cannot assent to such a belief without protest.

But if this is indeed the case, may not the writer hope that many will concur with him in hoping that this state of affairs may prove to be a very transitory phase ? The youthful enthusiasts who are so fond, nowadays, of making the Victorian Gothic Revival a butt for their humour would do well to study, in a more tolerant spirit, the grand enthusiasm that inspired it, and give up a little more of their time to the study of English mediæval work. Let them be warned, however, that such study may make of them enthusiasts too, and that their names, at some future time, may be treated with the same scant respect, and their works with the same blind prejudice, as now are those of such men as Pugin, Street and Pearson.—Yours faithfully,

SHERARD J. H. PRYNNE [*A.*].

William Butterfield

By MAURICE B. ADAMS [*F.*]

It was a happy idea and a generous thought which induced my friend Mr. Lindsay Butterfield to present the Institute Library with the apprenticeship agreement between his revered uncle's father and Thomas Arber the builder, of Horseferry Road, in 1831. Mr. John E. Newberry, on page 211 in the current issue of the JOURNAL, quotes another incident from my paper, "Architects from George IV to George V" (read before the Glasgow Institute of Architects in 1912*), as to this pioneer and great Victorian architect having been registered in 1831 as a student of the "Architects' Society," which association became defunct prior to the founding of the Institute in 1834. At first sight these two statements appear contradictory, but actually are not so. I quite agree that Mr. Newberry is right about William Butterfield senior's probable intention as to making his eminent son a builder, thinking a good honest trade likely to be more lucrative than a doubtful profession. The boy was evidently actuated by different aims, and so associated himself with the study of architecture, as above stated. To understand correctly what happened, I suggest it is well to remember how the enterprise of a builder and the function of an architect were comprehended during the earlier half of the nineteenth century. The business of building is inherent in both occupations, and for a considerable time both callings were in practice united in individual cases or they were regarded as interchangeable. For example, in 1794 Sir John Soane gave up a place of £300 a year in the Board of Works and was the means of obtaining the post for Mr. Groves, a builder.† Sir William Chambers and the Brothers Adam personally undertook building contracts for producing finished structures complete, and Robert Adam, of course, also designed and supplied the furniture for some of his mansions so built. Henry Holland, the architect, as a case in point, bargained to erect a house for Lord Thurlow for £6,000, but it ran up to £18,000, and an arbitration ensued, when G. Dance and J. Wyatt, R.A., acted as assessors, deciding that Holland should refund part of the cost to his Lordship.† This doing of builders' work by architects naturally induced a very uncertain view as to the relation-

* JOURNAL R.I.B.A., 20 June and 27 July 1912. (Full report and list of architects attached made up to that date in the order of their birth.)

† Farrington Diary, 1794.

ships of professional architects, while even to this day ordinary people regard the practitioner in architecture as an expensive luxury and reckon a " Surveyor " of any sort as good, if not better.

The first architectural journal published in England was issued in 1786, and George Cook, who practised in the dual capacity of architect and builder, acted as editor and the well-known John Carter did his illustrations. *Loudon's Encyclopædia of Cottages, Houses and Farms*, produced in 1830, the year of William Butterfield's start in the profession, shows how little architecture was popularly appreciated when the chemist of Norfolk Street, Strand, took his son William to the Pimlico builder's yard of T. Arber. Anyhow, it was thought a practical step to make William a craftsman and constructor. James Brooks, also one of the most accomplished church architects of the past century, commenced his career in a similar fashion. My father, too, shared the elder Butterfield's notions, and so before I was articled I worked with three good building firms and helped Thomas Cain to make a large oak rood screen from the designs of Sir Gilbert Scott. Simultaneously I was attending a Science and Art school, and became subsequently an assistant master under the Kensington Department. My excuse for this personal reference is that I am enabled the better to realise the state of affairs alluded to and make my point clear.

After Butterfield had commenced to practise he worked in a smithy to personally execute some of his wrought-iron designs. Whether such unconventional methods as these would be advantageous nowadays or compatible with present conditions is another matter. J. M. Brydon and his contemporaries, such as J. D. Sedding, tried to associate architectural practice with craftsmanship, and there can be no doubt that any architect is all the better for a practical experience as to the economic use of materials and the way of handling them from a builder's standpoint. After all that architects have suffered during and since the war (Sir Charles Ruthen's recent charge as to their being profiteers notwithstanding), I question whether it may not become necessary in the near future for ordinary working architects to revert to the eighteenth-century methods by combining building work with architectural design—that is to say, if they are to obtain a reasonable livelihood and pay the taxation imposed by a Government subsisting on subsidies and pledged to bonus increments to opulent officials, often out for power rather than the cause; while " the brutal and extortionate upthrust from below "* prevents an economic output in building. The outlook is not inspiring, and " unification " is difficult to realise in the face of contemporary conditions.

Messrs. Collcutt and Hamp were the designers of the First Saloon of the P. & O.S.N. *Narkunda*, an illustration of which was given in Mr. Arthur J. Davis's Paper on the Decoration of Ocean Liners, which appeared in the last issue of the JOURNAL. No architect's name was attached to the illustration, as it could not be ascertained at the time of going to press, and the design may have been wrongly attributed to Messrs. Mewes and Davis, whose names appear on an illustration placed beneath.

* Walther Rathenau, 1921, great German *Socialist!*

The Royal Academy and Mural Decorative Art

The President and Council of the Royal Academy, with a view to promoting the Arts of Design connected with the decoration of buildings, propose to hold an Exhibition of Decorative Painting and Sculpture at Burlington House in January and February 1923. The Exhibition will have a twofold object: in the first place, to direct the attention of the public, and especially of those who are concerned with the erection and adornment of public buildings, to the important part which the arts of painting and sculpture should take in architectural schemes, by showing what British artists can contribute to this end when suitable opportunities are offered to them; and, secondly, to suggest to younger artists and students the great possibilities of these Decorative Arts for the expression of the thoughts and feelings of the community at each turning-point in its history.

The Royal Academy Schools have recently started the study of Decorative Painting on a large scale, and other Schools of Art are working in the same direction. The President and Council think that the time has now arrived for a public review of our resources and openings in this field of art, and they therefore hope that civic authorities throughout the country will take a prompt and practical interest in the scheme of the Exhibition, which will include works in painting, mosaic, tapestry or sculpture for the permanent decoration of buildings, and designs or cartoons in drawing or painting, models in plaster, etc., for such decorations. They are confident that with suitable encouragement many of our younger artists will be found capable of carrying on and developing the great traditions of these once honoured, but now neglected arts.

Decorations designed as suggestions for imaginary buildings or spaces would be acceptable for the Exhibition. At the same time, with a view to the practical encouragement of artists in this direction, the President and Council would be glad to know of any schemes of decoration which municipal or other authorities either intend or might find it possible to put in hand, and would hope to receive information, with details of the measurements, lighting, etc., of any definite spaces in buildings which would be available for decoration with subjects of local or national interest by an artist or artists selected by open competition; it being understood that such authorities would not be bound in any way to accept any of the competing designs.

The London County Council has agreed to place certain wall spaces in its new County Hall at the disposal of four of the principal Art Schools of London, for decoration by the students under the supervision of the masters of these schools. The Committee of the British Empire Exhibition, 1924, will also, it is understood, provide a large extent of space for mural decoration in the new Exhibition Buildings at Wembley Park. It is hoped that other municipal authorities will follow these examples.

The modern understanding of the high position and value of mural decoration—of its part in the rhythm and harmony of an architectural design, and its power of commemorating the spirit of a race—is immediately due to the

work of Puvis de Chavannes in France. But it should be remembered that he was only reviving, though with the peculiar force and freshness of his genius, the spirit of Decoration as it was known to the mosaic artists of the Byzantine period, to the mediæval artists who adorned our cathedrals with painted and sculptured scenes from sacred and national legends on roof and wall and window, and to the great Italians of the Renaissance whose frescoes and reliefs play so splendid and yet so integral a part in the effect of the churches and palaces of Florence, Venice, Rome and other famous cities. By means of these decorations the Arts were made a source of inspiration to everyone. Their influence was blended with the daily purpose and use of each building, and made itself felt by a quiet and habitual impression ; they were thus accepted as an essential part of an æsthetic and social education which continued, as a matter of course, throughout the life of the ordinary person.

It is something of this spirit that the President and Council of the Royal Academy desire to see revived, and they hope that suitable opportunities may be found for its realisation in our public buildings.

CONFERENCE ON LABORATORY FITTINGS.

The Council of the Chemical Society arranged a Conference in July 1920 to consider whether, in view of the high prices of materials, economies could be effected in the equipment of chemical laboratories. Mr. Paul Waterhouse, Mr. Alan Munby, Mr. Stanley Peach, and Mr. George Hubbard represented the Institute at the Conference. The result of the meetings of the Conference, and of a small committee of the Chemical Society appointed to investigate present practice, has now been published under the title of " Notes on the Furnishing and Equipment of Chemical Laboratories." The report contains an epitome of the methods in use for forming and treating bench-tops, reagent shelves, fume cupboards, sinks, and waste channels, while notes on ventilation, supply services, and floor and wall surfaces are added. A short bibliography is given on the subject of laboratories, upon which, however, there is very little literature. *Nature*, in reviewing the report, says : " Laboratory fittings are always costly, and at the present time, when so much educational work is held up owing to lack of funds for its material development, any information which will enable those responsible for designing laboratory fittings to cheapen and simplify requirements is bound to be of service. As regards the use of wood particularly, it seems much to be desired that experiments be undertaken in order to ascertain whether many of the cheaper soft woods cannot, by impregnation or other suitable treatment, be made to serve in place of imported hard woods."

The report may be consulted in the Institute Library.

THE ROYAL WEDDING.

By command of His Majesty, the President of the Royal Institute of British Architects and Mrs. Waterhouse were invited to be present at the wedding of H.R.H. Princess Mary.

HIGHER BUILDINGS FOR LONDON.

At a General Meeting of the Institute on 6 March the question of permitting higher buildings in London was discussed by a large audience. The meeting, after an exhaustive discussion, decided by a majority of 79 votes to 8 to support the Council's action and to condemn the movement in favour of higher buildings. A full report of the proceedings will be given in the next issue of the JOURNAL.

R.I.B.A. ANNUAL DINNER.

The annual dinners of the Institute, which have been suspended since 1914, will this year be resumed. The dinner will be held at the Prince's Restaurant, Piccadilly, on 24 May, and the Council are very desirous that there should be a large and representative attendance of members of the Institute. A number of distinguished guests are expected. The price of tickets is 15s., for members and for members' guests, exclusive of wines and cigars. Members are requested to give the names of their guests when applying for tickets.

Early application would greatly facilitate the arrangements ; and if members would send intimation to the Secretary some days beforehand as to the friends near whom they desire to sit, every endeavour will be made, when arranging the plan of the tables, to meet their wishes as far as possible.

ROYAL COMMISSION ON GREATER LONDON.

On the recommendation of a Joint Committee, composed of representatives of the four Standing Committees and the Town Planning and Housing Committee, the Council have appointed four members to give evidence on behalf of the Royal Institute before the Royal Commission on Greater London.

THE BRITISH SCHOOL AT ROME.

Mr. John W. Simpson, Past President, has been appointed by the Council to represent the Royal Institute for the years 1922–1924 on the Council of the British School at Rome.

THE COAL SMOKE ABATEMENT SOCIETY.

Mr. W. G. Newton has been appointed to represent the R.I.B.A. on a deputation to the Minister of Health.

THE ARCHITECTURAL ASSOCIATION.

A grant of £100 has been made by the Council in aid of the funds of the Architectural Association, and an instalment of £125 of the R.I.B.A.'s donation to the A.A. Endowment Fund has also been voted.

THE UNIFICATION AND REGISTRATION COMMITTEE.

The following were appointed to serve on the Committee :

Mr. Walter Cave, F.R.I.B.A.
Mr. E. P. Warren [*F.*] (Berks, Bucks and Oxon Architectural Association).
Mr. Alan E. Munby [*F.*] (York and East Yorkshire Architectural Society).
Mr. E. T. Boardman [*F.*] (Norfolk and Norwich Architectural Association).
Mr. T. Aikman Swan [*A.*] (Edinburgh Architectural Association).

VISITS TO BUILDINGS OF INTEREST.

The Art Standing Committee are organising a series of visits to buildings of interest during the coming spring and summer. The following visits have already been arranged :—

Somerset House, Saturday, 29 April 1922.
St. George's Chapel, Windsor, Saturday, 17 June 1922.
Greenwich Hospital, Saturday, 22 July 1922.
Hampton Court, Saturday, 19 August 1922.

It is hoped also to arrange visits to the Bush Building, Aldwych, and to the Port of London Authority Building.

Members desirous of attending should notify the Secretary of their intention not later than ten days before the date on which the visit takes place.

EXHIBITION OF ARCHITECTS' WORKING DRAWINGS.

As the Exhibition of Working Drawings at the R.I.B.A. has been greatly appreciated by students and junior members, at the special request of many of these the period of opening has been extended to 7 p.m. daily (Saturdays 5 p.m.), until the termination of the exhibition.

Arrangements have been made for holding a special students' evening on Wednesday, 15 March, at 8 p.m., in connection with the exhibition. Students from the architectural schools and others are invited to attend. The architects of the buildings, the working drawings of which are exhibited, have kindly consented to be present, and will give students information on special points of interest. No cards of admission are required. Light refreshments will be provided.

SPECIAL ELECTION TO THE FELLOWSHIP.

Mr. William Walcot has been elected a Fellow of the Institute under the provisions of Bye-law 12.

BOARD OF ARCHITECTURAL EDUCATION.

R.I.B.A. Alteration in Probationers' Qualifications.

Applicants desirous of qualifying for registration as Probationers R.I.B.A. must in future produce drawings showing an elementary knowledge of freehand drawing instead of examples of geometrical, perspective and freehand drawing.

RESIGNATION OF LICENTIATE.

Mr. Thomas B. Horsfield has resigned his Licentiateship of the Institute.

MASONIC MEMORIAL BUILDING.

A meeting of Members and Licentiates of the Royal Institute of British Architects, who are also Freemasons, will be held at No. 9 Conduit Street, W.1, on Thursday, 23 March 1922, at 5 p.m , to consider the proposed Memorial and, if thought fit, to move a resolution to be forwarded to the Grand Secretary.

In view of the great importance of the proposal, it is hoped that everyone who is qualified will attend and will notify the Honorary Secretary, R.I.B.A., P.M. 1328, at 9 Conduit Street, not later than Saturday, 18th inst., stating their Lodge and qualifications.

THE LIGHTING OF PUBLIC BUILDINGS.

At the invitation of the Council of the Illuminating Engineering Society, the Council of the R.I.B.A. desire to inform their members that there will be a discussion on the subject of " The Lighting of Public Buildings " at 8 p.m. on Tuesday, 28 March. The meeting will be held at the House of the Royal Society of Arts (18 John Street, Adelphi). A summary of " Experimental Work and Results " will be presented by Messrs. J. W. T. Walsh, M.A., H. Buckley, B.Sc., and E. H. Rayner, Sc.D., of the National Physical Laboratory. Captain W. J. Liberty, Public Lighting Inspector to the City of London, will deal with various " Decorative Interiors " of Town Halls, etc.

Any members who would care to take part in the discussion are asked to send their names to the Secretary R.I.B.A. as soon as possible, and all members of the Royal Institute are cordially invited to be present.

Competitions

Competitions Open.

Auckland War Memorial.
R.I.B.A. Colour Competition.
Dundee War Memorial.

The conditions and other documents relating to the above competitions may be consulted in the Library.

Allied Societies

NORTHERN ARCHITECTURAL ASSOCIATION.

The President, Mr. Paul Waterhouse, visited Newcastle-on-Tyne on 21st February, and was entertained at dinner by the President of the N.A.A. (Mr. T. R. Milburn), at which there were present the Lord Mayor of Newcastle (Alderman R. H. Millican), members of the Council of the N.A.A., and other guests. Apologies for absence were received from Major Harry Barnes, M.P., Mr. Ian MacAlister (Secretary R.I.B.A.), and Professor Hatton (Armstrong College).

Mr. T. R. Milburn again presided at the general meeting held at the rooms of the Northern Architectural Association, when there was a large attendance of members. Introducing Mr. Waterhouse, Mr. Milburn said a visit from the President of the R.I.B.A. marked an epoch in the history of the Northern Association. There had lately been a great deal of talk about the unification of the R.I.B.A. and allied societies, and following upon his predecessor in office (Mr. Simpson), no one had done more to secure that than had Mr. Waterhouse.

The allied societies were probably more important than any other section of the profession, since, roughly speaking, they represented 3,500 members out of 4,500. Although they were not all members of the R.I.B.A., everything was leading up to that. There had never been a better feeling nor closer touch amongst members of the profession than that which had been brought about by the visits of Mr. Waterhouse to the country members.

Mr. Waterhouse, in the course of his speech, said it was a great pleasure to him to visit the Allied Societies of the Institute, because there was a real brotherly feeling amongst architects. That feeling was especially strong between those in London and those who belonged to allied societies outside London. He believed that the non-metropolitan people had not always understood how much they were appreciated in London, and London had not always realised what they derived from the friendship of the allied societies.

The strength of the Institute lay not in London, but in the vast group of men who represented the interests of architects not only in England, but throughout the world. The Institute had so grown that it had become imperial, with allied societies in every quarter of the British Dominions—Australasia, Africa, India and Canada—and in the outlying places of the world, such as Hong Kong. Beyond doubt the Institute was the finest architectural society in Europe. The growth of the organisation brought its responsibilities to those associated with the Institute, and they had to make the idea of empire a solid one.

Perhaps nothing within the purely British sphere of the Institute had shown the solidarity and brotherhood of the corporate body more clearly than the movement towards unification. There had been some misunderstanding about that scheme, and he wished to make it clear that it was not a scheme started by some faddist in London, or that it was fostered by the Council in London. The scheme had its origin amongst the general body of the profession.

To his mind, said the President, unification was a fine thing, though the scheme might be complex, and might involve the sacrifice of some principles.

Everybody had a right to express their opinions, but he felt that the critics of the unification scheme had launched their criticisms before the scheme was born. He therefore proposed, with the approval of the Council, to issue a statement upon the whole movement.

Whilst holding definite views upon unification, his duty, as President, would be to see that the prestige of the Institute was not in any way let down ; that no class in the Institute was prejudiced beyond the extent demanded by the spirit of sacrifice. Something had to be given up, but it was his duty to see that the something was not excessive.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.

The eighth general meeting of the Birmingham Architectural Association was held on Friday, 10 February, at the School of Art, Margaret Street, Birmingham. Mr. H. T. Buckland, F.R.I.B.A., took the chair, and Mr. H. G. Watkins, F.R.I.B.A., read a paper on " War Memorials."

Mr. Watkins stated that a war memorial, to be a true memorial, must clearly express its purpose. He therefore ruled out all utilitarian structures, and confined himself to those which are unmistakably war memorials, or, in other words, monuments which are combinations of architecture and symbolic sculpture. These he dealt with historically up to the beginning of the nineteenth century, mentioning particularly the Winged Victory of Samothrace, the Arch of Titus, Trajan's Column, and the Gattamelata statue at Padua. He then dealt with the later monuments, classifying them nationally in order to show how the character and ideals of the nation are exemplified in its architecture and sculpture. Italian memorials, as illustrated by that to Garibaldi, are marked by exuberance and freedom from restraint, typical of the race, while the earlier monuments of the Germans were dignified and scholarly until the teachings of Treitschke and Nietzsche began to take effect, when they became coarse and heavy. Of all the nations, perhaps the French show the truest appreciation of the right combination of architecture and sculpture, while English monuments, though dignified and correct, are rather dull and lacking in imagination.

Coming to memorials erected as a result of the Great European War, the first one mentioned was that to Nurse Cavell, which, in the speaker's estimation, is not a success. The outstanding feature of the great movement to erect war memorials in this country has been the universality of the smaller monuments and the multiplicity of these in our villages, churches, clubs, etc. As an inevitable result of the tendency to erect these smaller monuments, few of the larger and more elaborate types have arisen, and nationally none of the various grandiose suggestions have yet materialised. Instead we have the Cenotaph in Whitehall and the simple slab over the grave of the Unknown Warrior in Westminster Abbey, both of which have taken such a hold upon the imagination of the people that it is doubtful whether any magnificent national memorial could now be erected which would make the same appeal.

As regards the vexed question of sites for war memorials, the lecturer thought that a large symbolic monument may well be placed in an open square, provided that there

is a suitable background, but the smaller monuments are better placed in unobtrusive surroundings.

In conclusion, Mr. Watkins showed a slide of a great arch which it is proposed to erect on the Bar-le-Duc to Verdun road. The sides of the arch are to have bands of sculpture, illustrating the endless procession of automobiles and French troops hurrying to the defence of Verdun. Mr. W. Haywood, F.R.I.B.A., proposed a vote of thanks to the lecturer, which was seconded by Mr. H. W. Hobbiss, A.R.I.B.A.

Ulster Society of Architects.

The Ulster Society of Architects has recently published the report of the Council for last year. The report deals with the question of the establishment of closer relations with the Institute and with the Royal Institute of the Architects of Ireland, the new Parliament Houses and the new Law Courts for Northern Ireland. The Registration Committee of the Society has completed the draft of a Bill for presentation to the Northern Parliament, but has had to postpone further action pending the completion of incorporation. The Education and Publicity Committee have been very active during the year and have been instrumental in establishing the Ulster Atelier for the junior members of the profession. Steps have been taken in regard to the assistance of the Society in the Architectural Section of the Degree of Science at Queen's University. On the occasion of the Royal visit to Belfast the Council was asked to prepare a scheme for decorating the city, which was carried out. The Council has been kept in touch with the Central London Committee on Unification through Mr. N. Fitzsimons. Progress has been made and a scheme devised to bring all architects within the United Kingdom together. Mr. R. M. Young [*F.*] has been appointed President of the Society for 1922.

Berks, Bucks and Oxon Architectural Association.

The following are taken from notes of minutes of Council meeting of the above Society held on 20 January :—

Record of Measured Drawings, etc.

Arrangements are being made to keep a record of measured drawings and illustrations of historical and interesting old buildings in Berkshire and surrounding districts. To make the record as complete as possible, members are invited to send to the Hon. Librarian, Mr. H. Whiteman Rising, 154 Friar Street, Reading, particulars of any suitable measured drawings or illustrations they possess, or any of whose existence they are aware in private collections, with particulars of where the drawings can be inspected, and, when possible, notes of any books or records containing accounts of the building. Members are also asked to send to Mr. Rising particulars of any old buildings of which it would be advisable to have measured drawings prepared and photos taken for record purposes, especially those which are likely to be demolished shortly, so that a record can be obtained before they are destroyed. It is proposed to prepare a list of buildings of which measured drawings are required, when the Society will offer special prizes for measured drawings of these buildings. In conjunction with this scheme the Local Authorities have arranged for photographs to be taken of interesting buildings in Reading which are threatened with destruction.

Best Building.—The Reading Society announced that it had been arranged to distinguish annually the best building erected in Reading, should one of sufficient merit be erected. A subcommittee, consisting of the President, the Chairman of the three Branch Societies, and a member of the Royal Institute Art Standing Committee, was appointed to consider the question and draw up a scheme.

Unification and Registration.—The Association does not commit itself to any definite policy until the policy of the R.I.B.A. is clearly defined. The President has undertaken to consult the President of the R.I.B.A. on this matter.

Governor of University College.—The President, Mr. Edward P. Warren, been elected a Governor of University College, Reading, to represent the Association.

The Nottingham and Derby Architectural Society.

A general meeting of the Society was held at Derby on Tuesday, 14 February, and a large number of members were present under the chairmanship of the President, Mr. A. Eaton, M.S.A.

Mr. G. Salway Nicol [*F.*] delivered a lecture on "The Towers and Domes of Italy."

Mr. Nicol said the domes of Italy are a distinctive feature of the Renaissance times, and almost every city and many villages possess one or more examples of this wonderful architectural feature.

The gradual evolution of domical structures is to be traced from very early times principally in the East, but no examples of these remain except of very modest dimensions.

The Romans of classic times have, however, left us the largest of all domes, the vast saucer-shaped roof of brick and concrete which spans a circle of 140 feet diameter called the Pantheon, and it is remarkable that this great achievement should be the only building of its kind left to us. This dome is built on a circular wall, 20 feet thick, which replaced an open colonnade of an earlier building.

The Byzantine architects were the first to dare to place such a roof on a system of arches and pendentives, and a fine example of such work is St. Mark's Church in Venice, where very considerable areas are vaulted with arches, domes, and semidomes. It was not, however, until the Renaissance was fully developed that we had the dome perfected and lifted to a great height, forming the dominant feature of such churches as St. Peter's at Rome, the Duomo at Florence, San Biagio at Montepulciano, and Santa Maria della Salute in Venice.

These very noble buildings have not received the attention they deserve from Englishmen, largely on account of the narrow and prejudiced outlook of such popular critics as John Ruskin, who so wrongly condemned the whole Renaissance movement in architecture.

No period in the history of building can show more energy, more freedom of thought and daring construction, than that of the great masters of the Renaissance.

The architects were generally both sculptors and painters, and delighted to unite these three arts in the palaces and churches which they built. Such men as Michael Angelo, Peruzzi, Raphael, Bramante, Bernini, have all important buildings to their credit, as well as the sculpture and painting with which they were decorated.

The dome of St. Peter's in Rome is the largest and probably the finest amongst many a score which were built at this time, but it has suffered so much from subsequent alterations and additions that it can only be properly appreciated when some study is given to it to realise what a splendid scheme Michael Angelo conceived, and almost completed, before he died.

Viewed from the north-east this can best be followed, and from this point the great scale of the church has its effect, and the splendid proportions and the refinement of the details appreciated. The main wall of the church is 165 feet high and encloses the sanctuary and transepts, which form three of the arms of the Greek cross, which was the plan of the original design.

This great wall is treated by one of the largest Corinthian Orders in existence, the capitals of which are 10 feet high, and

produces with its dignified and restrained treatment a wonderful effect of might and power. Above this is built the " drum " of the dome, crowned by its great circular cornice to a diameter of about 150 feet. Above this again is reared the " peristyle," which, with its own cornice, carries the cupola itself, which in turn is crowned by a very elaborate and beautiful lantern. These simple but magnificent features attain a height of about 440 feet, or twice the height of the towers of York or Durham. These great masses piled one above the other are not mere size, but are designed with the greatest skill in beauty and refinement. Unfortunately, the plan was altered in later times and much of the effect destroyed; the portico and the smaller supporting domes have never been executed as designed by Michael Angelo.

Leading up to this design are many smaller schemes, notably Bramante's little dome, San Pietro in Montario, San Gallo's domed church in Montepulciano, and many others, which served as experiments for St. Peter's. The children of St. Peter's are very numerous, and include the domes of Paris, London and Washington, and many have combined with them a system of small domes and towers, such as at Venice, whose Santa Maria della Salute figures perhaps more than any other building in the world on the painter's canvas.

These buildings will repay careful study and contemplation equally with the great Gothic cathedrals, and they will be found to express broader and nobler thoughts in a language of greater tradition and dignity.

The lecture had been arranged by the Society in order to interest the public in the beauties of architecture.

NORTHERN ARCHITECTURAL ASSOCIATION.

The Senate of the Durham University has sanctioned the arrangements with regard to the commencement of a School of Architecture at the Armstrong College, and the Northern Architectural Association has agreed to hand over to the Armstrong College the sum of £460, and to subscribe a minimum of £50 a year towards the expenses of the New School.

NOTES BY THE PRACTICE STANDING COMMITTEE.

On the evening of 8 February the members of the Practice Committee, by the kindly hospitality of the Chairman, Mr. John Slater, dined with him at the Athenæum. In addition to the Committee, there were also present Mr. Paul Waterhouse (President), Sir Reginald Blomfield, R.A. (Past President), Mr. A. W. S. Cross (the late Chairman of the Committee), Mr. Ian MacAlister (Secretary of the Institute), and Mr. H. Godfrey Evans (Assistant Secretary). The President, in proposing the health of Mr. Slater, referred to the inexhaustible youth and energy of their host, who, after unequalled services to the profession in connection with architectural education, was still prepared, at a time when most men would think only of their own leisure, to carry out the onerous duties of Chairman of the Practice Committee. Mr. Slater, in his reply, spoke of the large amount of work which fell to the lot of the Committee, and, in alluding to the labours of the members, expressed particularly his appreciation of the fact that a man of the high official position of Mr. Topham Forrest (Architect to the London County Council) was with them as a member of the Committee to place his knowledge and experience at the service of his brother architects. Mr. Topham Forrest, in response, stated that he was pleased to serve on the Committee, and that in his relations with architects in his official capacity he felt it both a duty and a pleasure to do everything in his power to assist his professional brethren.

THE SOCIETY OF ARCHITECTS' PRESIDENT.

Mr. Edwin J. Sadgrove [*F.*] has been co-opted by the Council of the Society of Architects as President for the remainder of the unexpired term of office rendered vacant by the resignation of Sir Charles T. Ruthen. Mr. Sadgrove is one of the Society's representatives on the R.I.B.A. Unification Committee, the Building Trades Parliament, the Architects' and Surveyors' Approved Society, the Beaux-Arts Committee, and is President of the Institute of Arbitrators.

Mr. Keith D. Young, F.R.I.B.A., having resigned his appointment of Architect to the Middlesex Hospital, has been appointed Consulting Architect by the Weekly Board. Mr. Alner W. Hall, M.C., F.R.I.B.A., has been appointed Architect to the Hospital, as from 1 January last.

Obituary

LORD HARCOURT.

Viscount the Right Hon. Lewis Harcourt, P.C. (elected Hon. Fellow in 1910), died suddenly at his London residence on 24 February. Lord Harcourt, who was born in 1863, was the son of the late Sir William Harcourt, the well-known Gladstonian statesman. His first position as a Minister after his election to Parliament was First Commissioner of Works, and in this office he delivered his maiden speech. In 1910 he was promoted from the Office of Works to succeed Lord Crewe as Secretary of State for the Colonies. When the Coalition was formed in 1915 he returned to the Office of Works. Mr. Harcourt was made a Privy Councillor in 1905 and was raised to the peerage in 1916. Appointed a Trustee of the Wallace Collection in 1911 and of the British Museum and National Portrait Gallery in 1913 and 1916, he was also a member of the Council and Executive of the British School at Rome and an Honorary Fellow of the R.I.B.A.

SMITH: THOMAS MARSHALL, elected an Associate in 1902, died on 20 February 1922.

EMMETT: H. A., elected a Licentiate in 1911, died on 6 March 1922.

EDLIN: V. A., elected a Licentiate in 1911.

In the obituary notice of Mr. Sidney John Dicksee in the last number of the JOURNAL the second contributor was Mr. W. A. Pite [*F.*], not Mr. A. B. Pite. Mr. Bernard J. Dicksee [*F.*] states that he was the cousin, not the brother, of the deceased.

Probationers R.I.B.A.

(*Continued from p.* 260 *in the last* JOURNAL.)

Since 1 August 1921 the following have been registered as Probationers of the Royal Institute :—

SCOTT : FREDERICK, 7 Eleanor Street, Cullercoats, Northumberland.
SHAW : CHARLES CECIL, 1 Holly Road, Northampton.
SHAW : MYFANWY, 73 Holyhead Road, Handsworth, Birmingham.
SHROFF : LOVJI FRAMROZ, 34 Westbourne Road, Barnsbury, N.7.
SILCOCK : FRANCES THELMA, " The Cross," Huyton, Lancs.
SMITH : HARRY HIRST, 6 Hereford Road, Southport.
THOMPSON : GERALD LEOPOLD, Park House, Park Terrace, Newcastle-on-Tyne.
TROKE : WALTER EDMUND, " Fairlight," 31 Malmesbury Road, Southampton.
TURNER : MAX DUNCAN, Bridge House, Shepley, near Huddersfield.
TURNER : RALPH HENRY, " Claremont," St. Andrew's Road, Bridport, Dorset.
TURNER : WILLIAM JAMES, 11 St. James Terrace, Morpeth.
TYDEMAN : ARTHUR EDGAR, 15 Lansdowne Gardens, S.W.8.
TYLER : ERIC BRIAN, 10 Archer Road, Penarth, Glam.
TYNDALL : DONALD ALFRED, 2 Eaton Square, Monkstown, Co. Dublin.
WALL : MAUD AMY MARGARET, Kent House, Oxton, Cheshire.
WESKER : SEFTON ERNEST ELLARD, 4 Beckenham Road, New Brighton, Cheshire.
WESTGATE : RICHARD MOSS, " Erinville," 57 St. Leonards Road, Norwich.
WHEELER : HARRY, Brockley House, Endwell Road, Bexhill-on-Sea.
WHINNEY : HUMPHREY CHARLES DICKENS, 7 Strathray Gardens, Eton Avenue, N.W.3.
WILLIAMS : EDWIN, 201 Edge Lane, Liverpool.

Members' Column

Members, Licentiates, and Students may insert announcements and make known their requirements in this column without charge. Communications must be addressed to the Editor, and be accompanied by the full name and address. Where anonymity is desired, box numbers will be given and answers forwarded.

LOST.

A THESIS entitled " Modern Methods of Construction, more particularly regarding School Buildings and Housing "; was lost after the Final Examination in June last. Any information which will lead to its recovery will be welcomed by the Secretary R.I.B.A.

OFFICES TO LET.

OFFICES to Let, one medium-sized room, one small room, at No. 12, Hart Street, W.C.—Apply Housekeeper, No. 16, Hart Street, W.C.1.

PARTNERSHIPS.

A.R.I.B.A., of exceptional experience, including quantities, who has carried out large and important works, and has works in view, desires a partnership in an office with good prospects.—Address Box No. 879, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

ASSOCIATE, 30 years of age, is desirous of a partnership or employment as assistant with a view to partnership. Special experience in domestic work, schools, hospitals and commercial premises. Previously with well-known London architect. Relinquished during the war an appointment as County School Architect. London or Home Counties preferred. Highest references and credentials.—Box 8322, c/o Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATE desires to purchase partnership in London firm. Ten years' experience, 2½ years' practice.—Apply Box 6322, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

APPOINTMENTS WANTED.

A.R.I.B.A. desires responsible post, town or country ; 24 years' varied experience in general work, and interior decoration of houses and ocean liners. Good practical knowledge in all branches. With present employers since 1912 (2 years' war service). Leaving solely through lack of work.—Apply Box 666, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

F.R.I.B.A., 8 years' practice before the war, 5 years' war service (Lt.-Col. R.E.), since engaged in an official capacity as architect to a large Housing Scheme, wishes to enter established firm with a view to partnership. Has some connection and some work in prospect.—Apply Box 7322, c/o Secretary R.I.B.A., 9 Conduit Street, W.1.

Minutes XII

SESSION 1921-22.

At a Special General Meeting, held on Monday, 6 March 1922, at 8 p.m., Mr. Paul Waterhouse, President, in the chair. The attendance book was signed by 56 Fellows (including 12 members of the Council), 35 Associates (including 3 members of the Council) and 3 Licentiates.

The Minutes of the Special General Meeting held on Tuesday, 7 February, having been published in the JOURNAL, were taken as read and signed as correct.

The President announced the object of the Meeting—viz., to elect the Royal Gold Medallist for the current year.

On the motion of the President, it was RESOLVED, by acclamation, that, subject to His Majesty's gracious sanction, the Royal Gold Medal for the promotion of Architecture be presented this year to Mr. Thomas Hastings of New York, in recognition of the merit of his work as an Architect.

The Special General Meeting then terminated.

At the Ninth General Meeting (Business) of the Session 1921-1922, held on Monday, 6 March 1922, immediately after the Special General Meeting above recorded, and similarly constituted, the Minutes of the Meeting held on 20 February, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced the decease of the following members :—

The Rt. Hon. Viscount Harcourt, P.C., who was elected an Hon. Fellow of the Institute in the year 1910, and Mr. Thomas Marshall Smith, who was elected an Associate in the year 1902.

It was RESOLVED that the regrets of the Institute for the loss of these members be recorded on the Minutes of the Meeting and that a message of condolence and sympathy be conveyed to their relatives.

The following member attending for the first time since his election was formally admitted by the President :—

Mr. John Batty, Associate.

The following candidates were elected to membership by show of hands under Bye-Law 10 :—

AS FELLOWS (6).

LENTON : FREDERICK JAMES, M.C. [*A.* 1912], Stamford.
PICTOR : ARTHUR JOHN [*A.* 1894], Bruton, Somerset.
THOMAS : PERCY EDWARD, O.B.E. [*A.* 1920], Cardiff.
TRAYLEN : HENRY FRANCIS [*A.* 1899],, Stamford.
WALKER : JOHN WILSON [*A.* 1905], Aberdeen.
WILSON : ROBERT GORDON, Junr. [*A.* 1902], Aberdeen.

AS ASSOCIATES (88).

ALLEN : JOSEPH STANLEY [Special War Examination], Birkenhead.
ALLISON : FREDERICK WILLIAM HARFORTH [Special War Examination], Harrogate.
ALLSFORD : ERNEST HAROLD [Special War Examination].
BARNARD : HAROLD THOMAS BENJAMIN [Special War Examination].
BARTLETT : PERCY JAMES [Special War Examination], Bristol.
BEASLEY : ALBERT [Special War Examination], Nottingham.

BEAUMONT : EUGENE EDWARD [Special War Examination].
BECK : HENRY BERKELEY [Special War Examination], Stafford.
BLOOMFIELD : EDWARD HAMILTON [Special War Examination].
BLOOMFIELD : HENRY LANCELOT [Special War Examination].
BOWRING : JOHN VALENTINE [Special War Examination].
BRANSON : PERCY KENNETH [Special War Examination], Leicester.
BROOKS : LESLIE CLIFFORD [Special War Examination].
BROWN : FRANK COLLIN [Special War Examination].
BROWN : GEORGE TALBOT [Special War Examination], Sunderland.
BUMPSTEAD : ALBERT DENNIS, P.A.S.I. [Special War Examination].
BURNETT : EDGAR [Special War Examination], Melton Mowbray.
BURNETT : FREDERICK WANDLASS, M.C. [Special War Examination], Penarth, Glam.
BYROM : RICHARD [Special War Examination], Bury, Lancs.
CARTER : WILLIAM [Special War Examination], Sunderland.
CHALLICE : JOHN [Special War Examination], Exeter.
CHECKLEY : GEORGE [Special War Examination], Prenton, Cheshire.
CLARK : SIDNEY CHARLES [Special War Examination].
COGSWELL : VICTOR GORDON [Special War Examination], Portsmouth.
COLE : ERIC [Special War Examination], Cheltenham.
COOK : HERBERT JAMES [Special War Examination], Sunderland.
CORDINGLEY : REGINALD ANNANDALE [Special War Examination], Sale, Cheshire.
COTTON : GILBERT HENRY [Special War Examination].
COUCHMAN : HAROLD WILLIAM [Special War Examination].
COWTAN : ALBERT CHARLES [Special War Examination].
CREEGAN : EDGAR WILSON [Special War Examination].
DETMOLD : FREDERICK GUY [Special War Examination].
EDWARDS : WILFRID BYTHELL [Special War Examination], Flint, N. Wales.
FIELDER : GEORGE HAROLD [Special War Examination].
GRANGER : WILLIAM FRASER [Special War Examination].
GREENWOOD : JAMES HENRY [Special War Examination].
GRIFFITH : HUGH NICHOLAS [Special War Examination], Southport.
GUY : WALDO EMERSON [Special War Examination], Claverley, Shropshire.
HAIRD : TOM WILLIAM [Special War Examination], Leicester.
HARDING : FRED HAROLD [Special War Examination], Leicester.
HAUGHAN : JOHN HOLLIDAY [Special War Examination], Silloth, Cumberland.
HEARD : GORDON THOMAS [Special War Examination].
HOLLIDAY : ALBERT CLIFFORD [Special War Examination], Liverpool.
HOWELLS : DAVID JOHN [Special War Examination], Swansea.
HUNT : REGINALD [Special War Examination], Oxford.
HUNTER : HARRY CORNELIUS [Special War Examination].
JOHNSON : CAMPBELL MCALPIN CAMERON [Special War Examination], Gloucester.
JONES : REGINALD HERBERT ANDREWS [Special War Examination].
JONES : RONALD HUGH [Special War Examination], Neath, S. Wales.
JONES : TOM LEONARD [Special War Examination], Newport, Mon.
KEESEY : WALTER MONCKTON, M.C., A.R.C.A., A.R.E. [Special War Examination].
KERR : JAMES AUBREY [Special Examination], Sydney, N.S.W.
KIRBY : EDWARD [Special War Examination], Wellingborough.
KNOTT : ALBERT LESLIE [Special War Examination].
LANGDELL : GEORGE ARTHUR [Special War Examination].
LAVENDER : EDWARD PRICE [Special War Examination].
LEATHART : JULIAN RUDOLPH [Special War Examination].
LEWIS : GEORGE STANLEY [Special War Examination], Liverpool.
LUKE : REGINALD LATHAM [Special War Examination].
MAHON : SIDNEY EDWARD [Special War Examination], Liverpool.
MARTIN : NATHANIEL [Special War Examination].
MAUGER : PAUL VICTOR EDISON [Special War Examination].
MILLER : CLAUDE ST. JOHN GARLE [Special War Examination].
MINTY : ROBERT JAMES HUGH [Special War Examination].
MITCHELL : EDWARD ARNOLD [Special War Examination].
NEWTON : PERCY MAURICE [Special War Examination], Hull.
NORTON : CHARLES JOSEPH [Special War Examination].
OSBALDISTON : GEORGE ALBERT [Special War Examination], Brisbane, Australia.
OWEN : ARTHUR TREVOR [Special War Examination], New Brighton, Cheshire.
PENMAN : EDWARD MEADOWS [Special War Examination].
PRICE : HARRY JAMES PARKIN [Special War Examination].
PRICHARD : LIONEL ARTHUR GEORGE [Special War Examination], Liverpool.
REES : VERNER OWEN [Special War Examination].
REVITT : GEORGE [Special War Examination], Derby.
RIDGE : THOMAS [Special War Examination], Oswestry.
RIPPINGHAM : THOMAS FRANCIS [Special War Examination].
SCRIVEN : CHARLES [Special War Examination].
SMITH : ALFRED EWART [Special War Examination], Leicester.
SMITH : CECIL [Special War Examination].
STURGEON : JOHN HENRY [Special War Examination], Brighton.
SUTCLIFFE : THOMAS WILFRID [Special War Examination], Rochdale, Lancs.
THORBURN : RICHARD [Special War Examination].
TRIMM : CHARLES ALGERNON, M.C. [Special War Examination].
WALKER : REGINALD BECKWICK [Special War Examination].
WHITE : CHARLES STANLEY [Special War Examination].
WILLIAMS : EDWIN [Special War Examination], Liverpool.
WILLIAMS : HOWARD [Special War Examination], Cardiff.
WINN : THOMAS JOHN ROSEWARNE [Special War Examination], Truro, Cornwall.

The President stated that the meeting was now open for discussion on the question of Higher Buildings for London, and the Secretary read the following notices of motion which had been received under the provisions of Bye-Law 61 :—

"That this General Meeting of the Royal Institute of British Architects approves the action taken by the Council in connection with the Report of the London Building Acts Committee."

To be moved by Mr. Maurice E. Webb [*F.*] and seconded by Mr. Raymond Unwin [*F.*].

"That this meeting approves the general principle of allowing buildings to be erected, in certain positions, to a greater height than is the present practice, subject to proper safeguards as to construction, fire escape, and fire attack."

To be moved by Mr. Delissa Joseph [*F.*] and seconded by Mr. H. Austen Hall [*F.*].

The resolution moved by Mr. Webb and seconded by Mr. Unwin was carried by 79 votes to 8. The resolution moved by Mr. Joseph and seconded by Mr. H. Austen Hall was rejected by 51 votes to 12. The following members also took part in the discussion :—

Sir Aston Webb, Past President.
Mr. Arthur Keen [*F.*], Hon. Secretary.
Professor S. D. Adshead [*F.*].
Mr. Andrew T. Taylor [*R.F.*].
Mr. O. P. Milne [*F.*].
Mr. W. R. Davidge [*F.*].
Professor A. Beresford Pite [*F.*].
Mr. Vernon Crompton [*F.*].

The Hon. Secretary having announced the dates of future meetings, the proceedings closed, and the meeting terminated at 10.20 p.m.